User Manual

CDG561 WE~P21

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CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022/A1 Class B.

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Chapter 1 Introduction

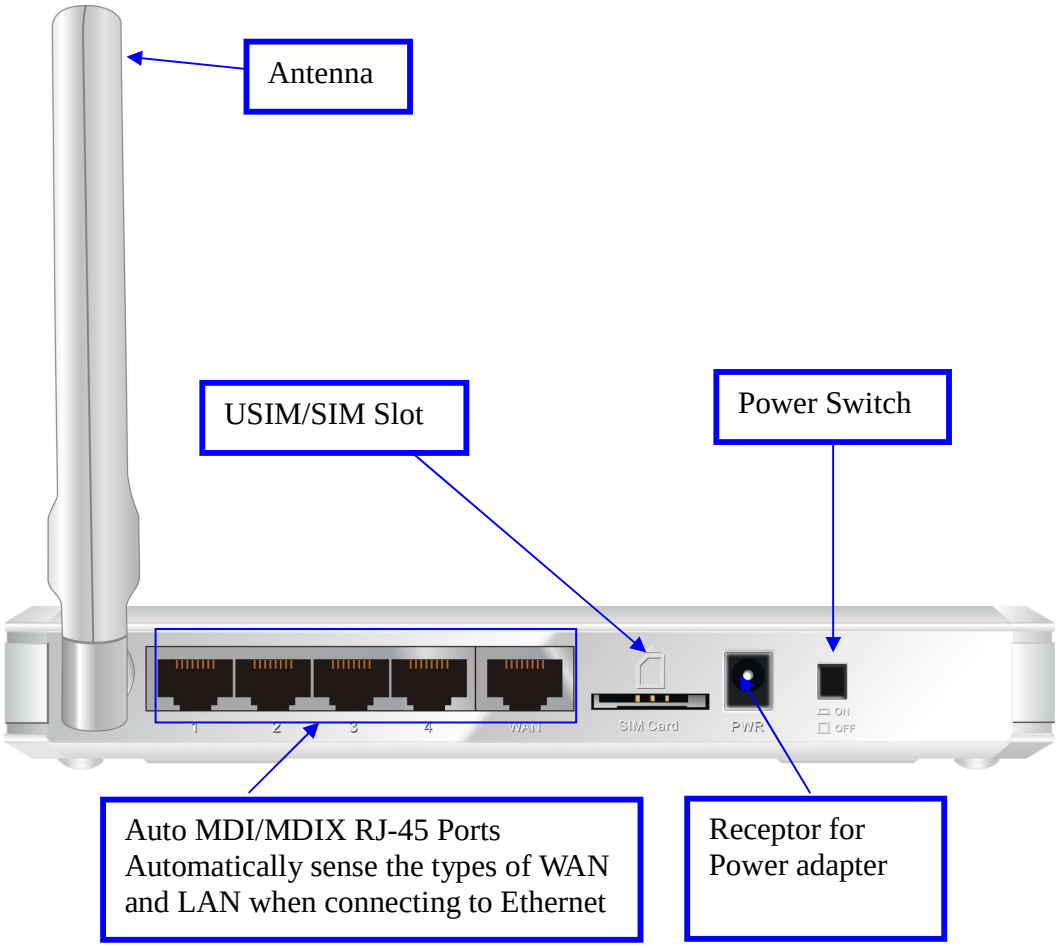
Congratulations on your purchase of this outstanding **CDG561WE~P21**. The device is HSPA+ router with built-in HSPA+ embedded module. It supports NAT, routing, firewall, VPN pass-through, auto-3G-dial-up backup connection, DHCP server, and so on. And is easy to configure and operate even for non-technical users. Instructions for installing and configuring this product can be found in this manual. Before you install and use this product, please read this manual carefully for fully exploiting the functions of this product.

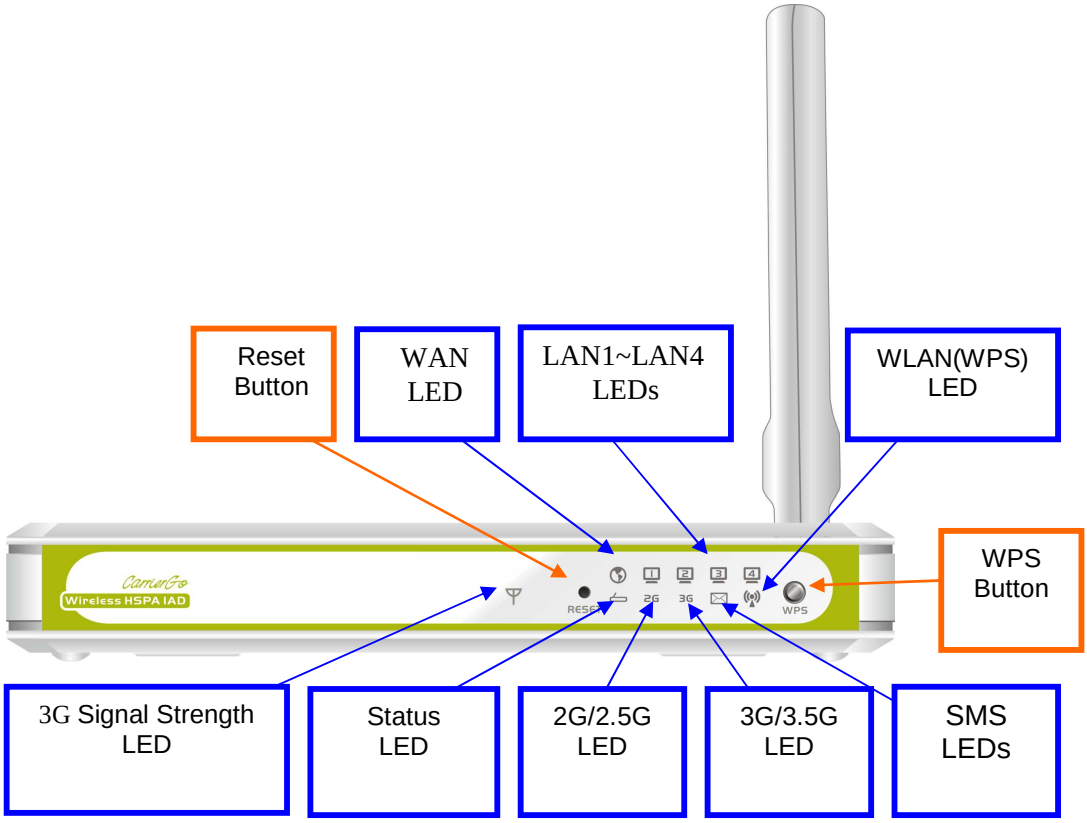
1.1 Package List

items	Description	Contents	Quantity
1	WiFi HSPA+ Router		1
2	Antenna		1
3	Power Adapter		1
4	CD		1

1.2 Hardware Installation

Hardware configuration




Reset Button
WAN LED
LAN1~LAN4 LEDs
WLAN(WPS) LED
WPS Button
3G Signal Strength LED
Status LED
2G/2.5G LED
3G/3.5G LED
SMS LEDs
Wireless HSPA IAD
RESET
2G
3G
WPS

LED indicators

	LED status	Description
Status	Green in flash	Device status is working.
3G Signal Strength LED	Red in flash	Disconnected. No SIM card / signal or unverified PIN code
	Amber in flash	Connecting.
	Red	Connected. Signal strength in level one (weak)
	Red in quick flash	Roaming alert, and 3G signal is weak
	Amber	Connected. Signal strength in level two or three (middle)
	Amber in quick flash	Roaming alert, and 3G signal is middle
	Green	Connected. Signal strength in level four or five (strong)
	Green in quick flash	Roaming alert, and 3G signal is strong
2G/2.5G LED	Green	EDGE or GPRS connection is established
	Green in flash	Data packet transferred via 2G/2.5G
3G/3.5G LED	Green	UMTS/HSDPA/HSUPA connection is established
	Green in flash	Data packet transferred via 3G/3.5G
SMS LED	Green	SMS storage is full
	Green in flash	There is any unread SMS in the storage
WAN LED	Green	RJ45 cable is plugged
	Green in flash	Data access
LAN LED	Green	RJ45 cable is plugged
	Green in flash	Data access
WiFi LED	Green	WLAN is on
	Green in flash	Data access
	Green in fast flash	Device is in WPS PBC mode

How to operate

Step 1. Attach the antenna.
1.1. Remove the antenna from its plastic wrapper.
1.2. Screw the antenna in a clockwise direction to the back panel of the unit.
1.3. Once secured, position the antenna upward at its connecting joint. This will ensure optimal reception.
1.4. And rip the “USIM/SIM & PWR” sign label from “Pull” tag.

1. Turn off the Power Switch first.
2. DO NOT connect WiFi HSPA+ IAD to power before performing the installation steps below.

Step 2. Insert SIM/USIM to IAD.

NOTE:
2.1. The WiFi HSPA+ IAD builds in a HSUPA 3G modem card. Please refer to your service provider for detailed feature information.
2.2. A 3G SIM/USIM Card with services is MUST, the Data service and the Voice service.

Step 3. Insert the Ethernet cable into LAN Port:
Insert the Ethernet patch cable into LAN port on the back panel of the WiFi HSPA+ IAD, and an available Ethernet port on the network adapter in the computer you will use to configure the unit.

Step 4. Insert the Ethernet patch cable into Wired WAN port:
Insert the Ethernet patch cable into Wired WAN port on the back panel of the WiFi HSPA+ IAD.

NOTE: The step does not need if you select the 3G Wireless WAN.

Step 5. Power on the IAD:
6.1. Connect the power adapter to the receptor on the back panel of your WiFi HSPA+ IAD.
6.2. Then plug the other end of the power adapter into a wall outlet or power strip.
6.3. Turn on the Power Switch.

Step 6. Complete the setup.
7.1. All LEDs will transient illumination to indicate power has been applied.
7.2. And then LEDs will flash ON and OFF as the Wifi HSPA+ IAD performs initialization and Internet connection processes. This will take a few minutes.
7.3. When complete, the Status LED will flash.

Chapter 2 Getting start

Insert the CD into CD reader on your PC. The program, AutoRun, will be executed automatically. And then you can click the Easy setup Icon for this utility.
Configure the settings by the following steps.

2.1 Easy Setup by Windows Utility

You can also use the Easy Setup Utility to configure it

Step 1. Select your language
Select Language then click “Next” for continues.

Step 2. Setup mode
You can select Wizard mode to run the setup step-by-step or run advanced mode to diagnose the network settings of the router.

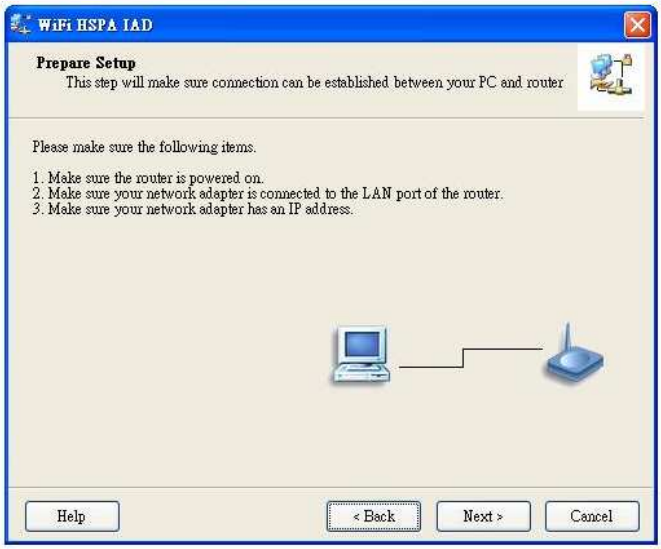
WiFi HSPA IAD
Setup Mode
This step will let you to choose one of the setup modes.
Wizard
This step-by-step guide will let you easily and quickly connect to the Internet.
Advanced
This will provide a diagnostic of your network and the settings used by the router.
< Back
Next >
Cancel

Step 3. Advanced mode Setup.
Check the PC, Router or Internet icons for the Status of PC, Router or Internet.

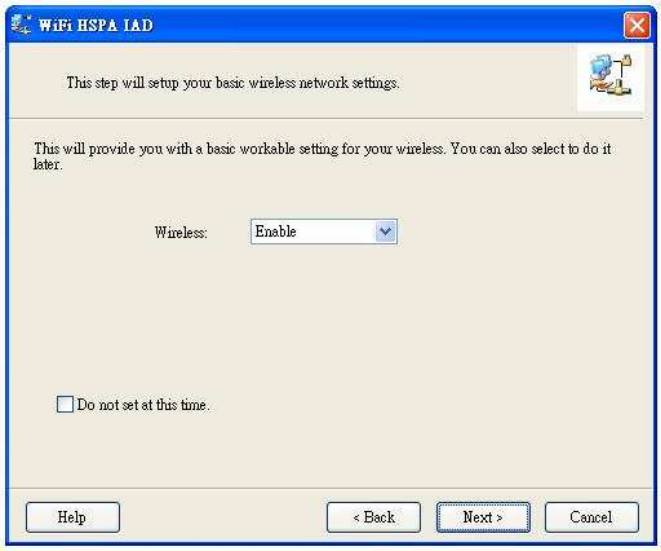
Step 4. Wizard mode-Prepare Setup

1. Make sure the router is powered on.
2. Make sure your network adapter is connected to the LAN port of the router
3. Make sure your network adapter has an IP address.

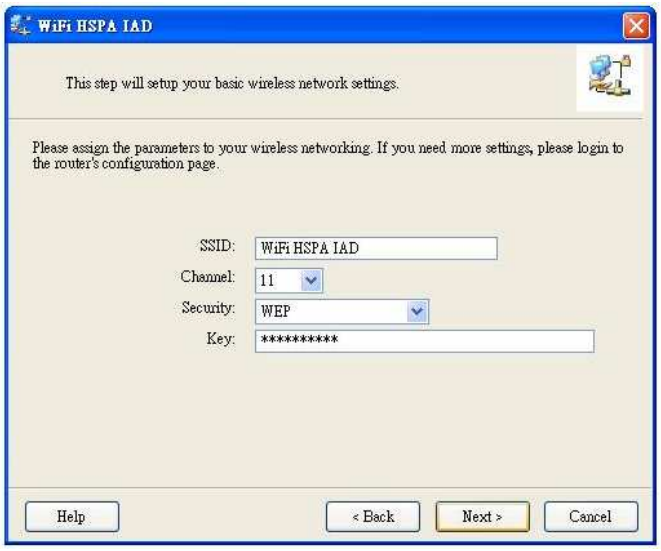
Click “Next” for continues


WiFi HSPA IAD
Prepare Setup
This step will make sure connection can be established between your PC and router
Please make sure the following items.
1. Make sure the router is powered on.
2. Make sure your network adapter is connected to the LAN port of the router.
3. Make sure your network adapter has an IP address.
Help
< Back
Next >
Cancel

Step 5. Wireless Setting.
Select Wireless Enable or Disable, then click “Next” for continues.

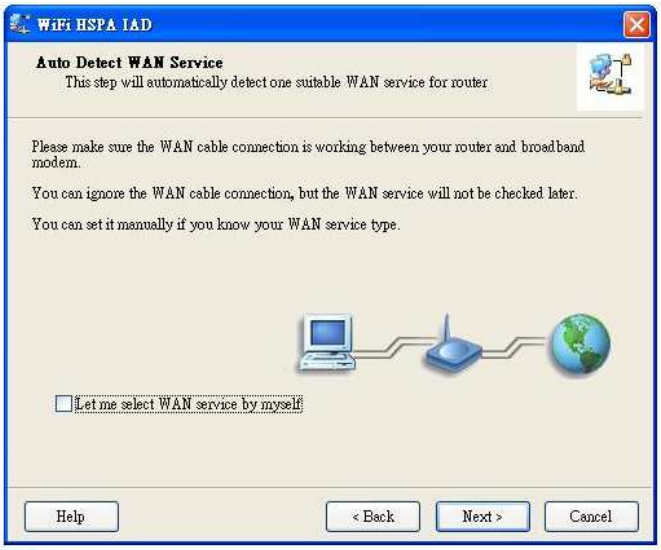

WiFi HSPA IAD
This step will setup your basic wireless network settings.
This will provide you with a basic workable setting for your wireless. You can also select to do it later.
Wireless:
Enable
Do not set at this time.
Help
< Back
Next >
Cancel

Step 6. Wireless Setting.
Key in the SSID, Channel and Security options, and then click "Next" for continues.



Step 7. Auto Detect WAN Service.
Click "Next" for continue.
Click the button, "Let me select WAN service by myself", to disable this function.

Note: The Item supports to detect the Dynamic and PPPoE WAN Services only


WiFi HSPA IAD
Auto Detect WAN Service
This step will automatically detect one suitable WAN service for router
Please make sure the WAN cable connection is working between your router and broadband modem.
You can ignore the WAN cable connection, but the WAN service will not be checked later.
You can set it manually if you know your WAN service type.
Let me select WAN service by myself
Help
< Back
Next >
Cancel

Example, the Dynamic WAN type is detected.

WiFi HSPA IAD
Auto Detect WAN Service
This step will automatically detect one suitable WAN service for router
A dynamic IP service has been found for your WAN. The following setup steps will be based on this setting.
If dynamic IP is not your expected WAN service, please select the correct one manually.
Let me select WAN service by myself
Help
< Back
Next >
Cancel

Step 8. Manual select WAN Service

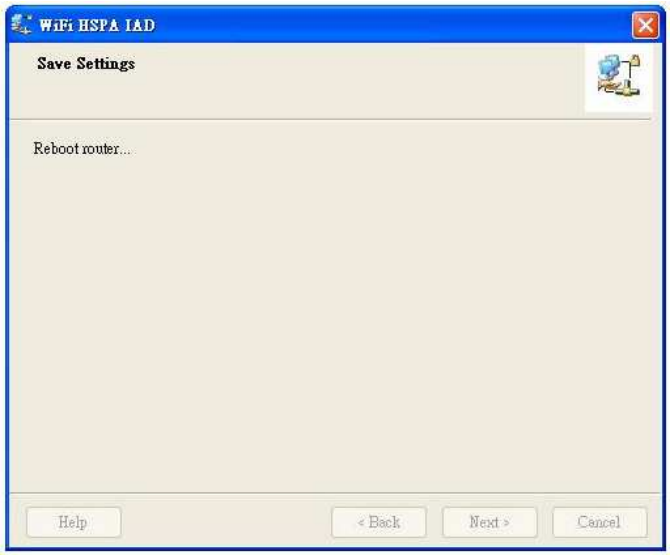
In the manual mode, Click the any icons for continues.

Example, 3G WAN Service:

Please fill in 3G service information which is provided by your ISP.

Step 9. Summary of the settings.
Click “Next” for continue.

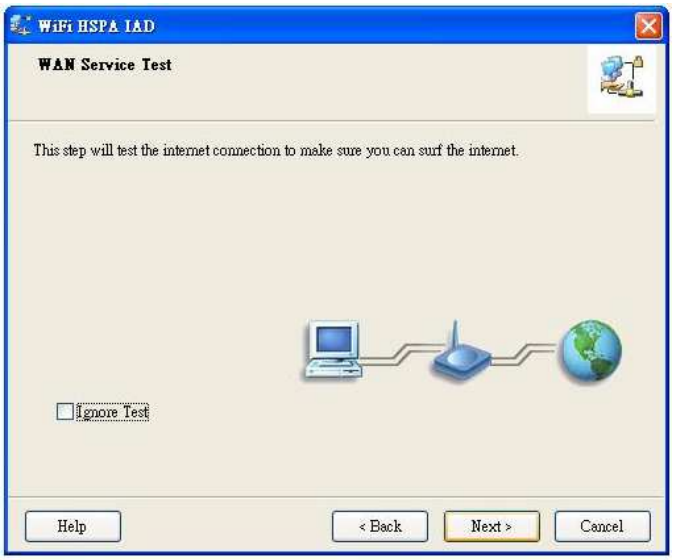
Step 10. Reboot
The WiFi HSPA+ IAD/Router is rebooted.



Step 11. Applied the Settings.
Click “Next” for continue.

WiFi HSPA IAD
Save Settings
Settings have been saved and initialized.
The next step will test your Internet connection. Or you can choose to ignore the test.
Help
< Back
Next >
Cancel

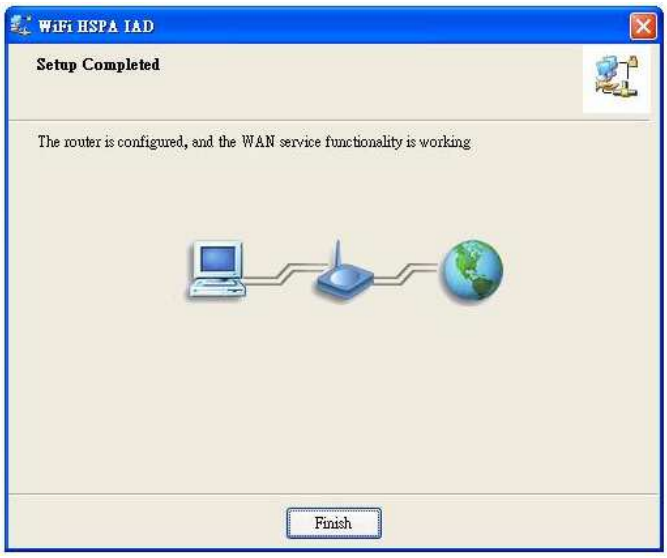
Step 12. Test the Internet connection.
Test WAN Networking service. Click “Next” for continue.
You can ignore the by select the “Ignore Test”.


WiFi HSPA IAD
WAN Service Test
This step will test the internet connection to make sure you can surf the internet.
Ignore Test
Help
< Back
Next >
Cancel

Step 13. Setup Completed.

13.1. The EzSetup is finish; you can open the default web browser to configure advanced settings of the WiFi HSPA+ IAD/Router.

13.2. Click “Finish” to complete the installation.



Chapter 3 Making Configuration

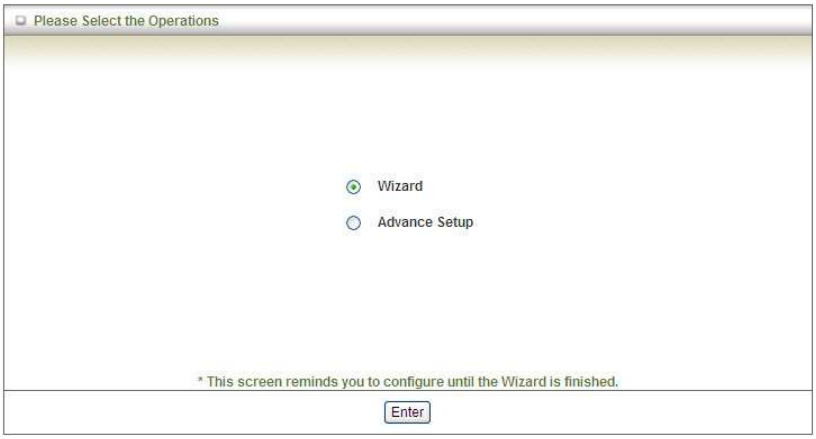
3.1 Wizard

Type in the IP Address (http://192.168.123.254)

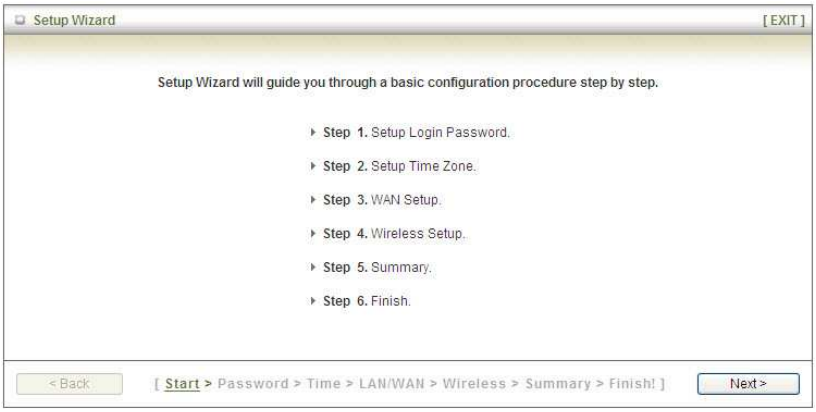
Type password, the default is “admin” and click ‘login’ button.

Select your language.

Press “Wizard” for basic settings with simple way.


Please Select the Operations
Wizard
Advance Setup
* This screen reminds you to configure until the Wizard is finished.
Enter

Press “Next” to start wizard.


Setup Wizard
[EXIT]
Setup Wizard will guide you through a basic configuration procedure step by step.
Step 1. Setup Login Password.
Step 2. Setup Time Zone.
Step 3. WAN Setup.
Step 4. Wireless Setup.
Step 5. Summary.
Step 6. Finish.
< Back
[Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!]
Next >

wizard

Step 1:
Set up your system password.

Setup Wizard - Setup Login Password
[EXIT]
Old Password
New Password
Reconfirm
< Back
[Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!]
Next >

Step 2:
Select Time Zone.

Setup Wizard - Setup Time Zone
[EXIT]
(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
Detect Again
< Back
[Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!]
Next >

Step 3:
Select Wan Type.

Auto Detecting or
Setup Manually.

Setup Wizard - Select WAN Type
[EXIT]
Auto Detecting WAN Type
Setup WAN Type Manually
< Back
[Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!]
Next >

Setup the LAN IP and WAN Type.

Step 4:
Please fill in 3G service information which is provided by your ISP.

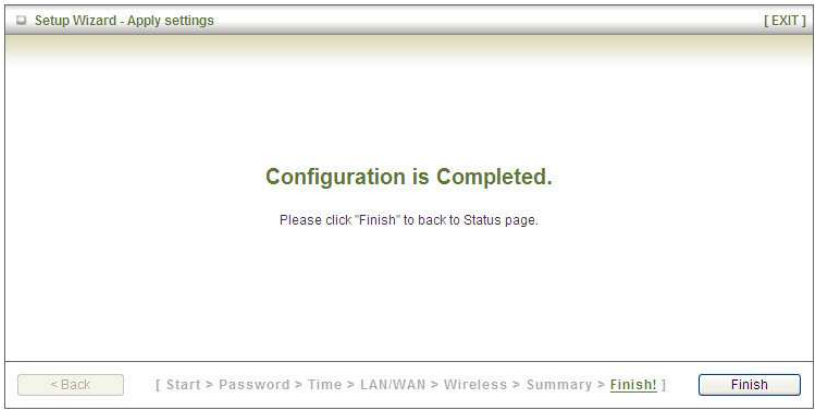
Example:

Step 5:
Set up your Wireless.

Set up your Authentication and Encryption.

Step 6:
Then click Apply Setting.
And then the device will reboot.

Step 7:
Click Finish to complete it.


Setup Wizard - Apply settings
[EXIT]
Configuration is Completed.
Please click "Finish" to back to Status page.
< Back
[Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!]
Finish

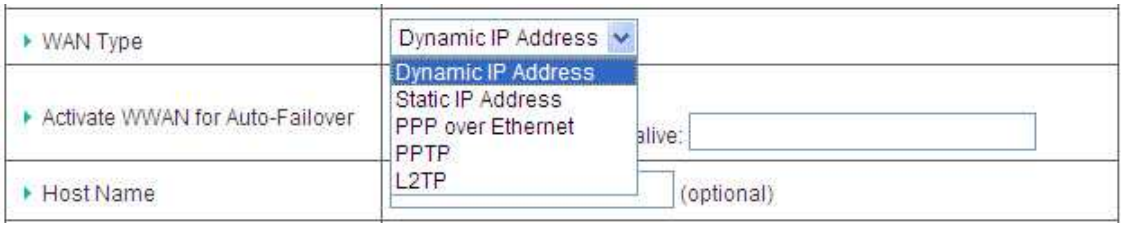
3.2 Advanced Setting

3.2.1 Basic Setting

BASIC SETTING
Network Setup
- Configure LAN IP, and select WAN type.
DHCP Server
- The settings include Host IP, Subnet Mask, Gateway, DNS, and WINS configurations.
Wireless
- Wireless settings allow you to configure the wireless configuration items.
Change Password
- Allow you to change system password.

1. Network Setup

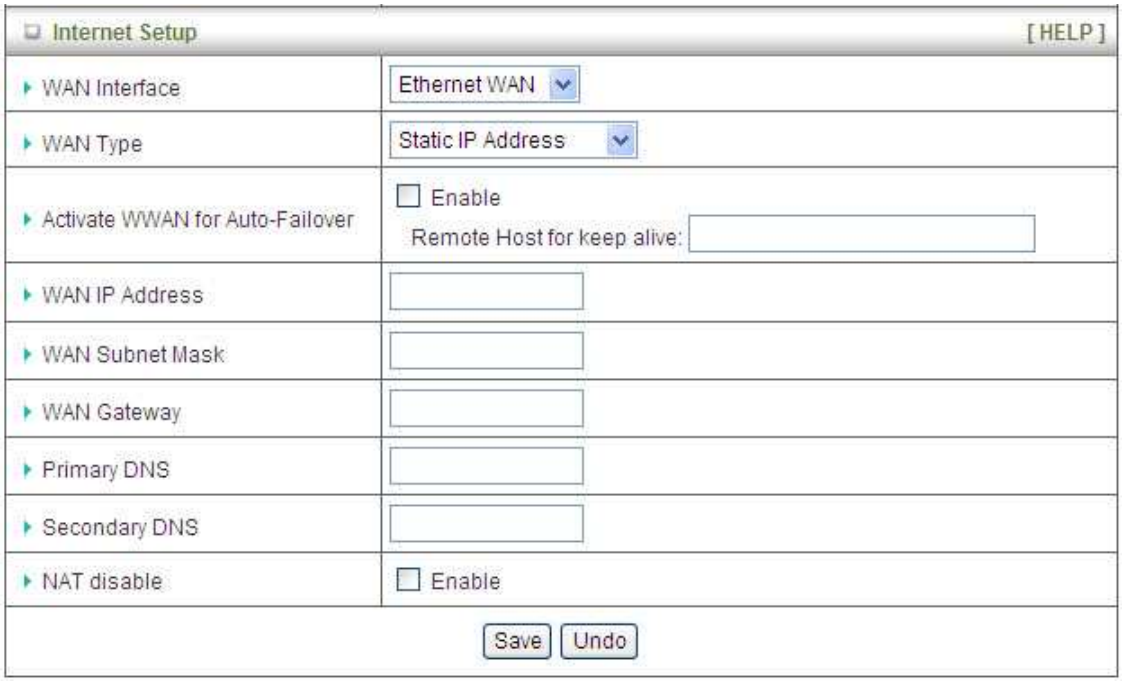
1. **LAP IP Address:** the local IP address of this device. The computers on your network must use the LAN IP address of your product as their Default Gateway. You can change it if necessary.
2. **Subnet Mask: insert 255.255.255.0**
3. **WAN Interface:** Select Ethernet WAN or Wireless WAN to continue.



4. **WAN Type**: WAN connection type of your ISP. You can click WAN Type Combo button

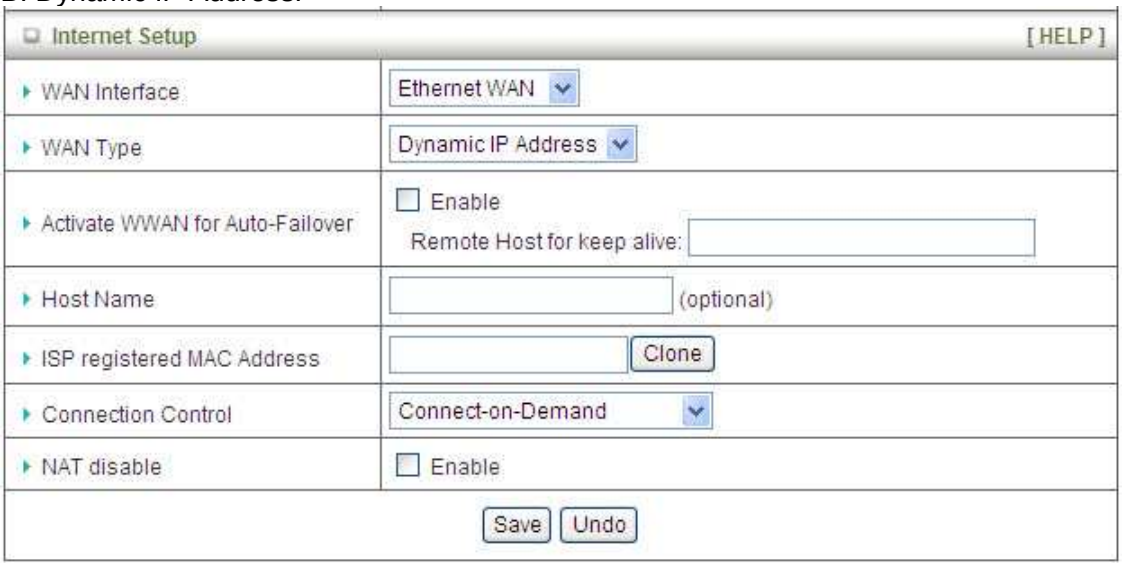
to choose a correct one from the following options:

A. Static IP Address:



WAN IP Address, Subnet Mask, Gateway, Primary and Secondary DNS: enter the proper setting provided by your ISP.

B. Dynamic IP Address:



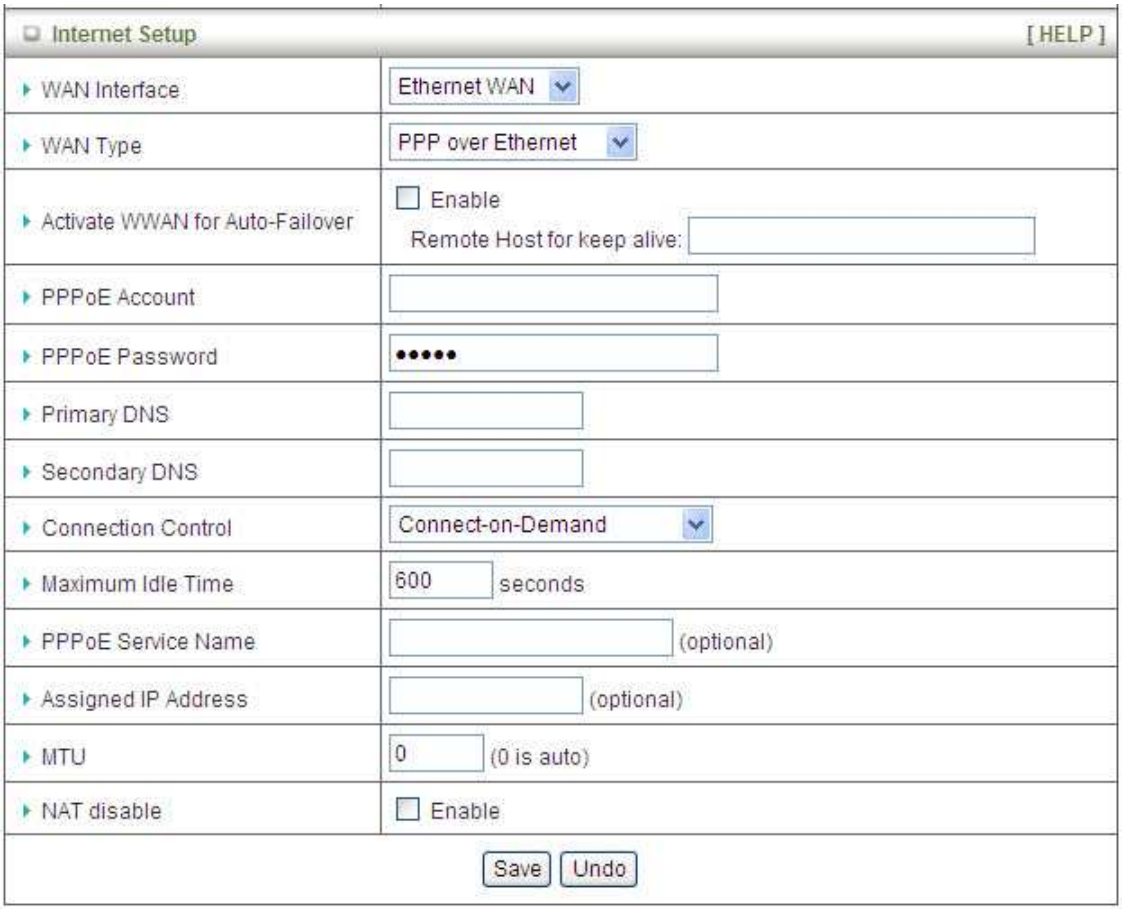
1. Active WWAN for Auto-Failover: The WAN type will be change to wireless-WAN automatically, if the wired-WAN is defunct.
2. Host Name: optional, required by some ISPs, for example, @Home.
3. ISP register MAC address: You can change the WAN port MAC address, it is your ISP assigned to you.
4. Connection Control: There are 3 modes to select:

   Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

   Auto Reconnect (Always-on): The device will link with ISP until the connection is established.

   Manually: The device will not make the link until someone clicks the connect-button in the Status-page.
5. NAT disable**:** the option bridges data form WAN port to LAN port.

C. PPP over Ethernet



1. Active WWAN for Auto-Failover: The WAN type will be change to wireless-WAN automatically, if the wired-WAN is defunct.
2. PPPoE Account and Password: the account and password your ISP assigned to you. For security, this field appears blank. If you don't want to change the password, leave it empty.
3. Primary DNS/ Secondary DNS: This feature allows you to assign a Primary/Secondary DNS Server, contact to your ISP to get it.
4. Connection Control: There are 3 modes to select:

   Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

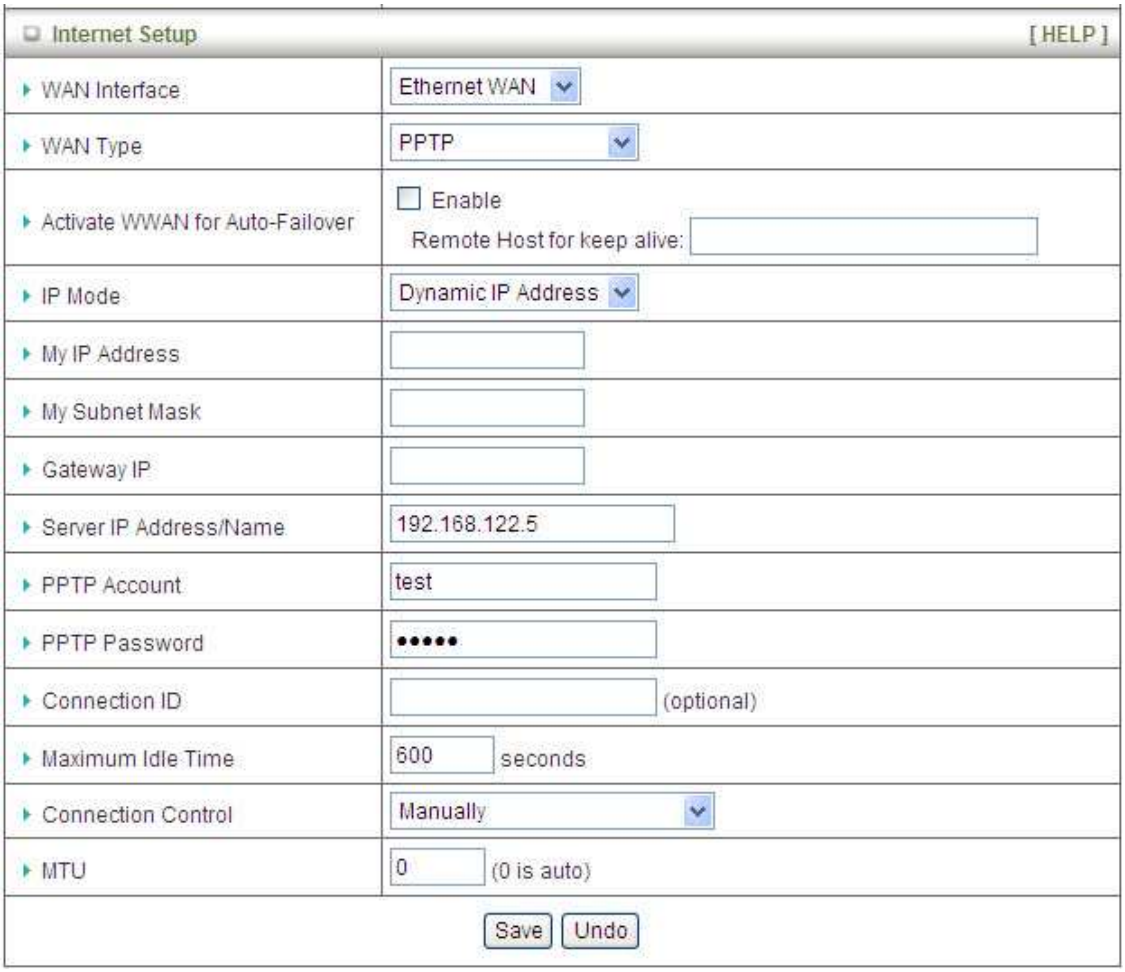
   Auto Reconnect (Always-on): The device will link with ISP until the connection is established.

   Manually: The device will not make the link until someone clicks the connect-button in the Status-page.
5. Maximum Idle Time: the amount of time of inactivity before disconnecting your PPPoE session. Set it to zero or enable “Auto-reconnect” to disable this feature.
6. PPPoE Service Name: optional. Input the service name if your ISP requires it. Otherwise,

leave it blank.

7. Assigned IP address: Optional, Input the IP address you want. Usually, leave it blank.
8. Maximum Transmission Unit (MTU): Most ISP offers MTU value to users. The default MTU value is 0(auto).
9. NAT disable: the option bridges data form WAN port to LAN port

D. PPTP



First, please check your ISP assigned and select the IP Mode - Static IP Address or Dynamic IP Address. For example: Use Static, the private IP address, subnet mask and Gateway are your ISP assigned to you.

1. Active WWAN for Auto-Failover: The WAN type will be change to wireless-WAN automatically, if the wired-WAN is defunct.
2. My IP Address, My Subnet Mask and WAN Gateway IP: the private IP address, subnet mask and Gateway IP your ISP assigned to you.
3. Server IP Address/Name: the IP address or URL of the PPTP server.
4. PPTP Account and Password: the account and password your ISP assigned to you. If you don't want to change the password, keep it empty.
5. Connection ID: optional. Input the connection ID if your ISP requires it.
6. Maximum Idle Time: the time of no activity to disconnect your PPTP session. Set it to zero or enable “Auto-reconnect” to disable this feature. If Auto-reconnect is enabled, this product will connect with ISP automatically, after system is restarted or connection is dropped.

Connection Control: There are 3 modes to select:

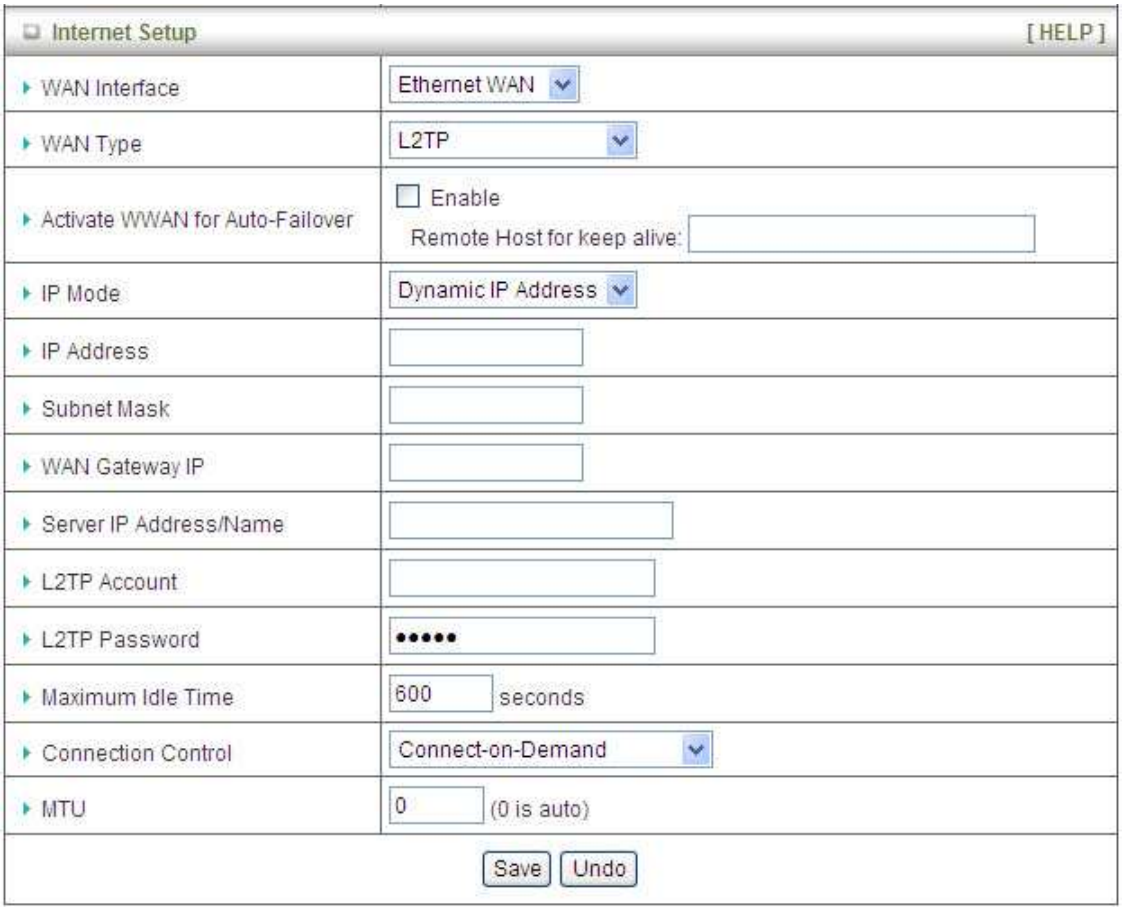
Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

Auto Reconnect (Always-on): The device will link with ISP until the connection is established.

Manually: The device will not make the link until someone clicks the connect-button in the Status-page.

7. Maximum Transmission Unit (MTU): Most ISP offers MTU value to users. The default MTU value is 0(auto).

E. L2TP



First, please check your ISP assigned and select the IP Mode - Static IP Address or Dynamic IP Address. For example: Use Static, the private IP address, subnet mask and Gateway are your ISP assigned to you.

1. Activate WWAN for Auto-Failover: The WAN type will be change to wireless-WAN automatically, if the wired-WAN is defunct.
2. IP Address, Subnet Mask and WAN Gateway IP: the private IP address, subnet mask and Gateway IP your ISP assigned to you.
3. Server IP Address/Name: the IP address or URL of the PPTP server.
4. L2TP Account and Password: the account and password your ISP assigned to you. If you don't want to change the password, keep it empty.
5. Maximum Idle Time: the time of no activity to disconnect your L2TP session. Set it to zero or enable “Auto-reconnect” to disable this feature. If Auto-reconnect is enabled, this product will connect with ISP automatically, after system is restarted or connection is dropped.
6. Connection Control: There are 3 modes to select:
   Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

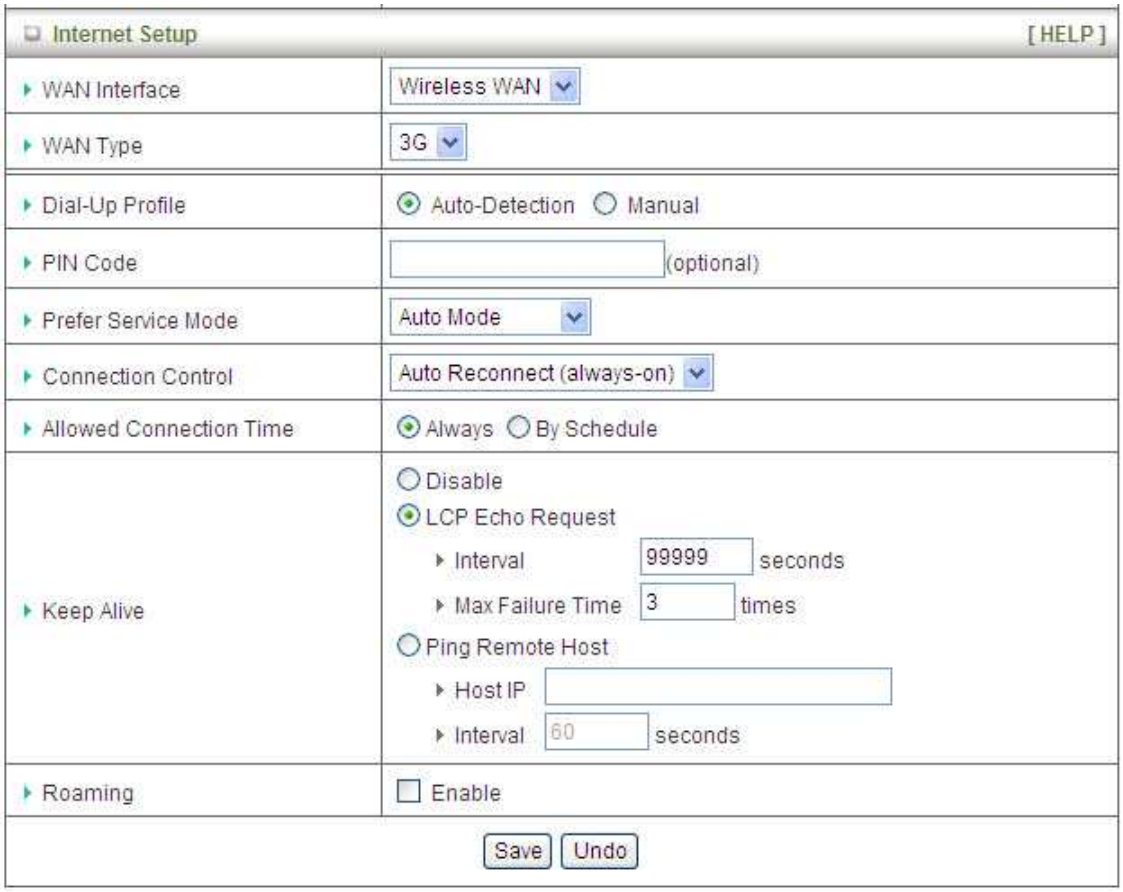
Auto Reconnect (Always-on): The device will link with ISP until the connection is established.

Manually: The device will not make the link until someone clicks the connect-button in the Status-page.

7. Maximum Transmission Unit (MTU): Most ISP offers MTU value to users. The default MTU value is 0(auto).

Or select Wireless WAN for 3G Setting.

F. 3G



For 3G WAN Networking. The WAN fields may not be necessary for your connection. The information on this page will only be used when your service provider requires you to enter a User Name and Password to connect with the 3G network.

Please refer to your documentation or service provider for additional information.

1. Dial-Up Profile: select auto or manual to continue.
2. Country: select your country.
3. Telecom: select your telecom.
4. 3G Network: select the 3G Network.
5. APN: Enter the APN for your PC card here.(Optional)
6. Pin Code: Enter the Pin Code for your SIM card(Optional)
7. Dial-Number: This field should not be altered except when required by your service provider.
8. Account: Enter the new User Name for your PC card here, you can contact to your ISP to get it.
9. Password: Enter the new Password for your PC card here, you can contact to your ISP to get it.

10. Authentication: Choose your authentication.
11. Primary DNS: This feature allows you to assign a Primary DNS Server, contact to your ISP to get it.
12. Secondary DNS: This feature allows you to assign a Secondary DNS Server, you can contact to your ISP to get it.
13. Connection Control: select your connection control
14. Keep Alive: you can diagnose your connection by it.

2. DHCP Server

Press **"More>>",**

1. **DHCP Server:** Choose either **Disable** or **Enable**
2. **Lease Time:** DHCP lease time to the DHCP client
3. **IP Pool Starting/Ending Address:** Whenever there is a request, the DHCP server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting / ending address of the IP address pool
4. **Domain Name:** Optional, this information will be passed to the client
5. **Primary DNS/Secondary DNS:** Optional, This feature allows you to assign a DNS Servers
6. **Primary WINS/Secondary WINS:** Optional, this feature allows you to assign a WINS Servers
7. **Gateway:** Optional, Gateway Address would be the IP address of an alternate Gateway. This function enables you to assign another gateway to your PC, when DHCP server offers an IP to your PC.

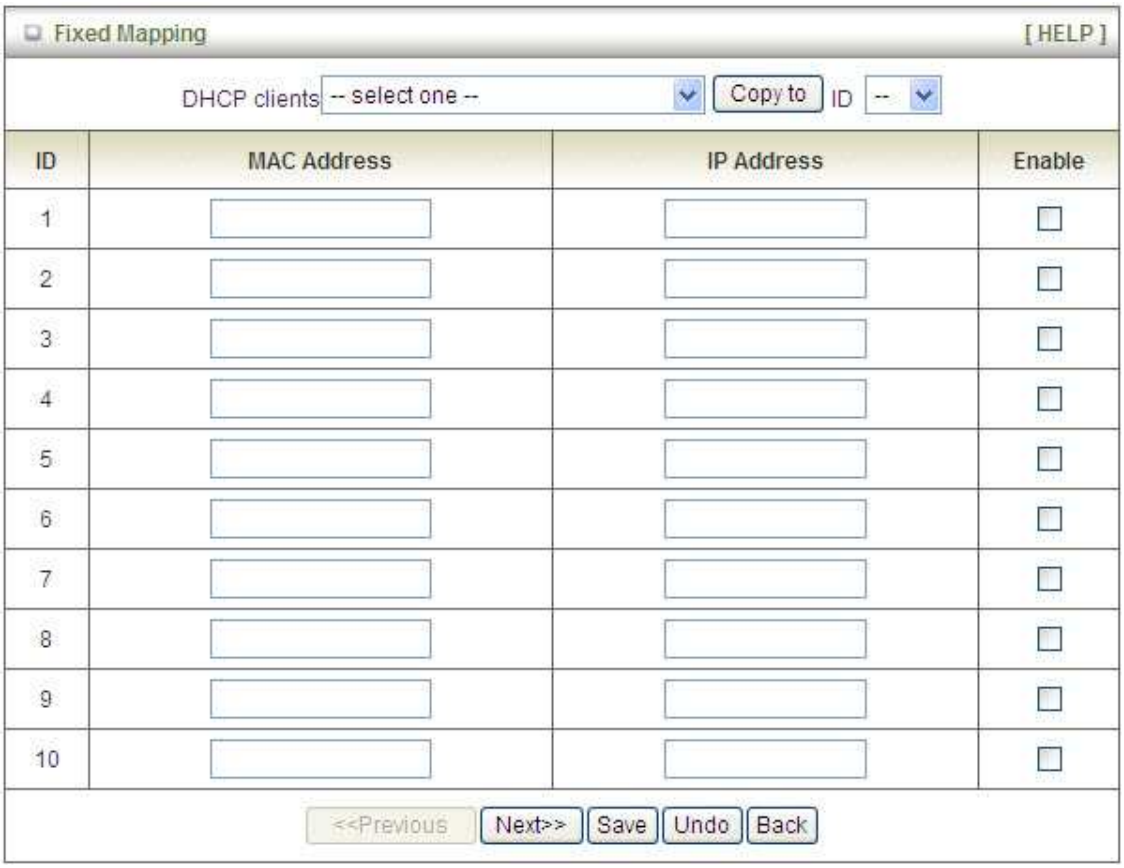
Click on "Save" to store your setting or click "Undo" to give up

DHCP Clients List

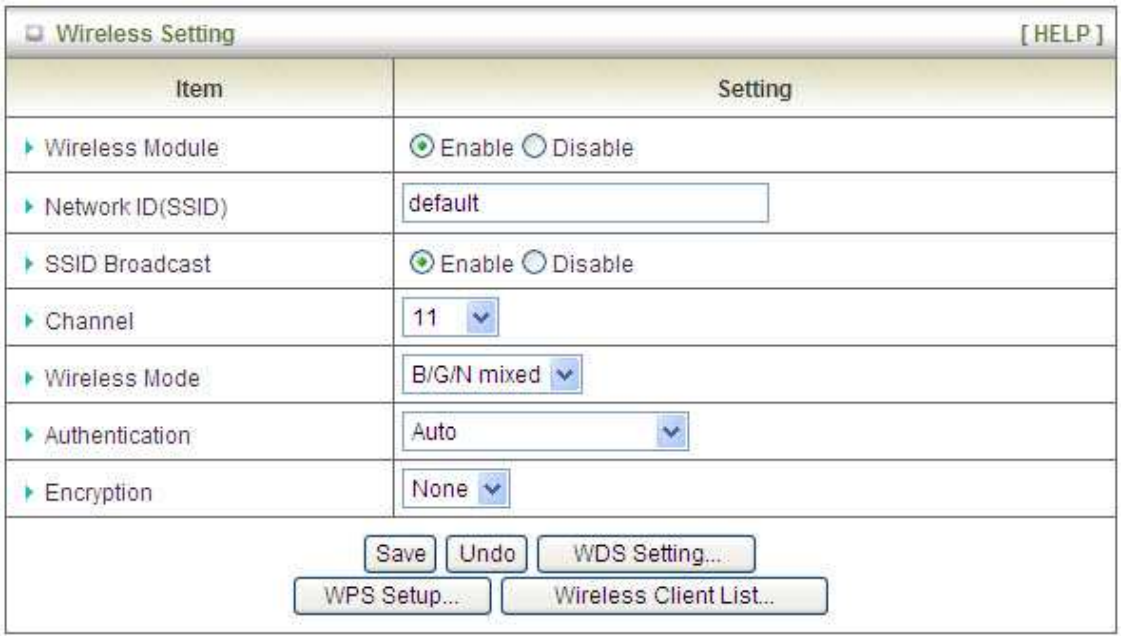
The list of DHCP clients shows here.

DHCP Fixed Mapping

The DHCP Server will reserve the special IP for special MAC address, shows below.



3. Wireless Settings



Wireless settings allow you to set the wireless configuration items.

1. **Wireless Module:** The user can enable or disable wireless function
2. **Network ID(SSID):** Network ID is used for identifying the Wireless LAN (WLAN). Client stations can roam freely over this product and other Access Points that have the same Network ID. (The factory setting is “default”)
3. **SSID Broadcast:** The router will broadcast beacons that have some information, including ssid so that wireless clients can know how many AP devices by scanning function in the network. Therefore, this function is disabled; the wireless clients can not find the device from beacons.
4. **Channel:** The radio channel number. The permissible channels depend on the Regulatory Domain.
   The factory setting is channel 11.
5. **Wireless Mode:** Choose B/G Mixed, B only, G only, N only, G/N Mixed or B/G/N mixed. The factory default setting is B/G/N mixed.
6. **Authentication mode:** You may select from nine kinds of authentication to secure your wireless network: Open, Shared, Auto, WPA-PSK, WPA, WPA2-PSK, WPA2, WPA-PSK/WPA2-PSK, WPA /WPA2.

Open

Open system authentication simply consists of two communications. The first is an authentication request by the client that contains the station ID (typically the MAC address). This is followed by an authentication response from the AP/router containing a

success or failure message. An example of when a failure may occur is if the client's MAC address is explicitly excluded in the AP/router configuration.

Shared

Shared key authentication relies on the fact that both stations taking part in the authentication process have the same "shared" key or passphrase. The shared key is manually set on both the client station and the AP/router. Three types of shared key authentication are available today for home or small office WLAN environments.

Auto

The AP will Select the Open or Shared by the client’s request automatically.

WPA-PSK

Select Encryption and Pre-share Key Mode
If you select HEX, you have to fill in 64 hexadecimal (0, 1, 2…8, 9, A, B…F) digits.
If you select ASCII, the length of pre-share key is from 8 to 63.
Fill in the key, Ex 12345678

WPA

Check Box was used to switch the function of the WPA. When the WPA function is enabled, the Wireless user must **authenticate** to this router first to use the Network service. RADIUS Server IP address or the 802.1X server’s domain-name.
Select Encryption and RADIUS Shared Key
If you select HEX, you have to fill in 64 hexadecimal (0, 1, 2…8, 9, A, B…F) digits
If you select ASCII, the length of pre-share key is from 8 to 63.
Key value shared by the RADIUS server and this router. This key value is consistent with the key value in the RADIUS server.

WPA-PSK2

WPA-PSK2 user AES and TKIP for Same the encryption, the others are same the WPA-PSK.

WPA2

WPA2 add uses AES and TKIP for encryption, the others are same the WPA.

WPA-PSK/WPA-PSK2

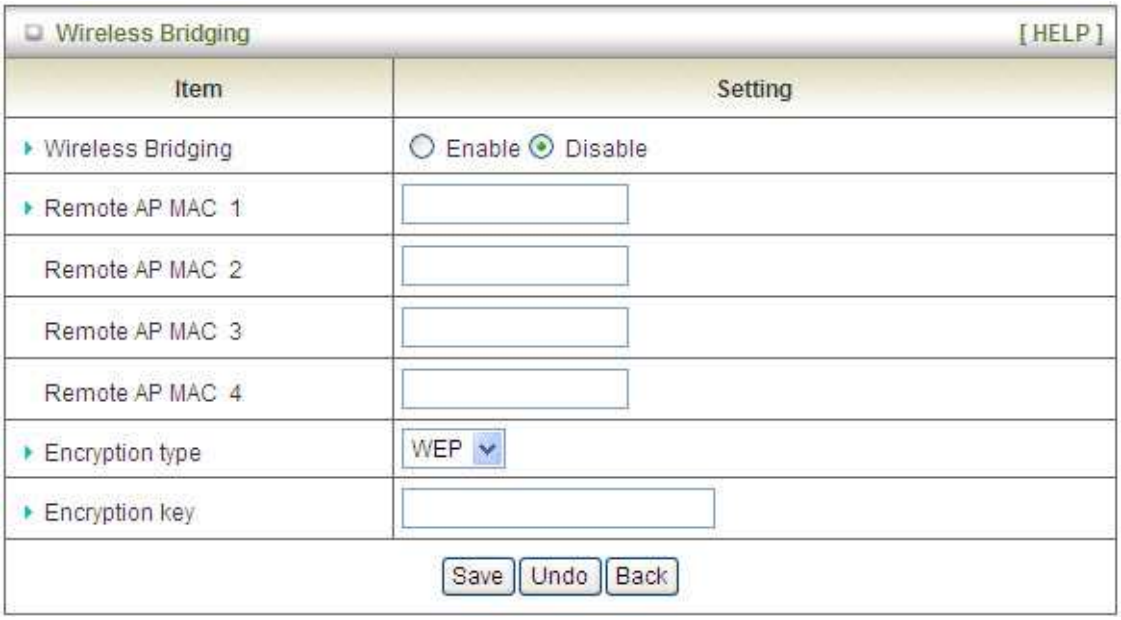
Another encryption options for WPA-PSK-TKIP and WPA-PSK2-AES, the others are same the WPA-PSK.

WPA/WPA2

Another encryption options for WPA-TKIP and WPA2-AES, the others are same the WPA.

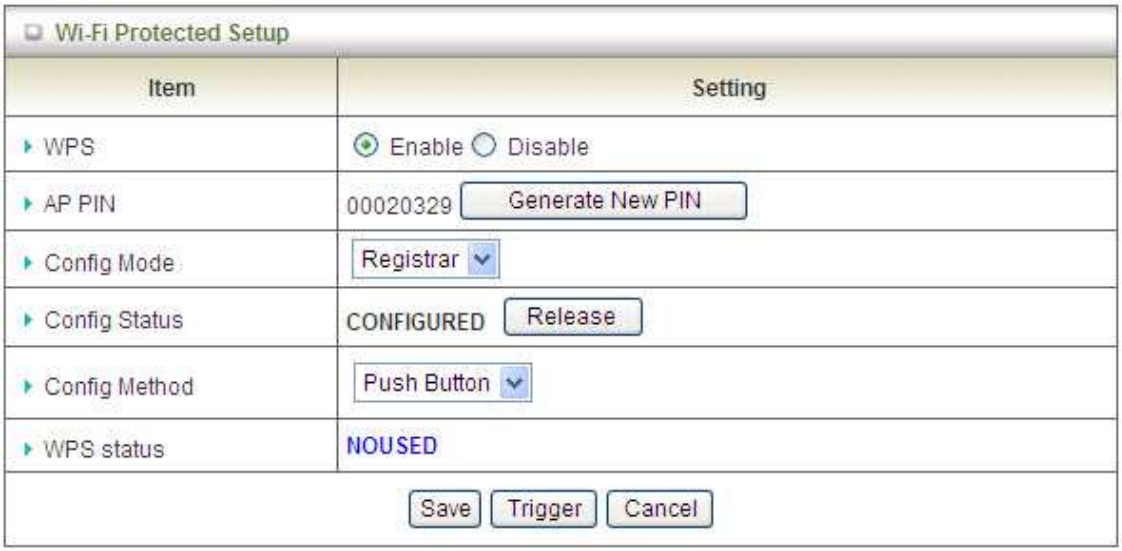
WDS(Wireless Distribution System) Setting

WDS operation as defined by the IEEE802.11 standard has been made available. Using WDS it is possible to wirelessly connect Access Points, and in doing so extend a wired infrastructure to locations where cabling is not possible or inefficient to implement.



WPS (Wi-Fi Protection Setup)

WPS is Wi-Fi Protection Setup which is similar to WCN-NET and offers safe and easy way in Wireless Connection.



Wireless Client List

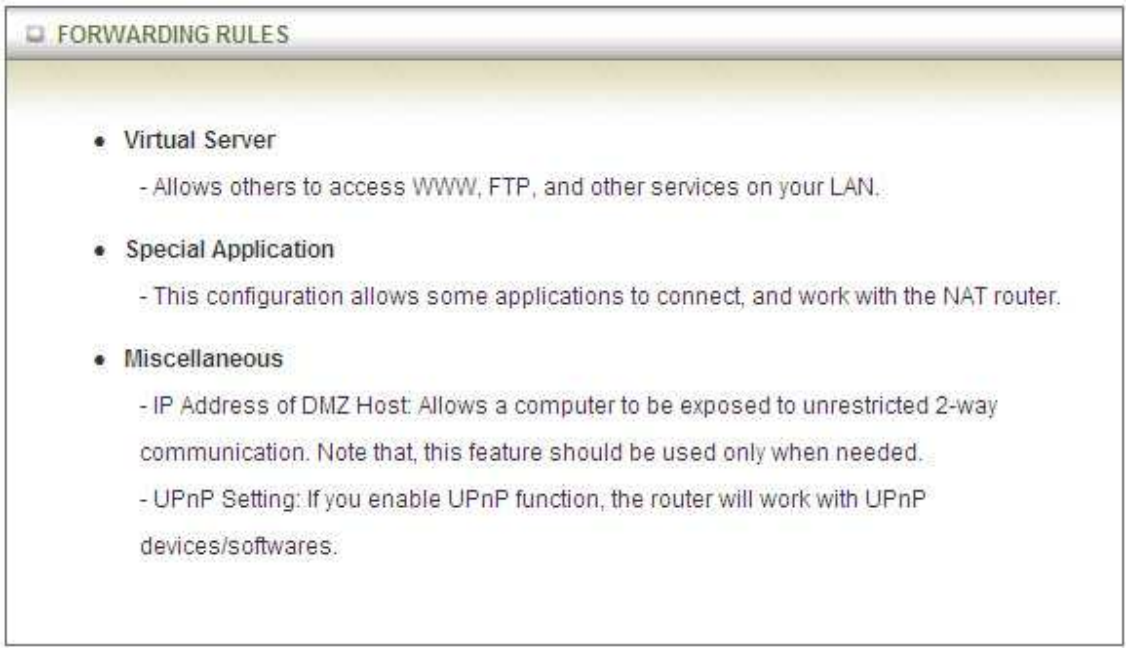
The list of wireless client is shows here.

4. Change Password

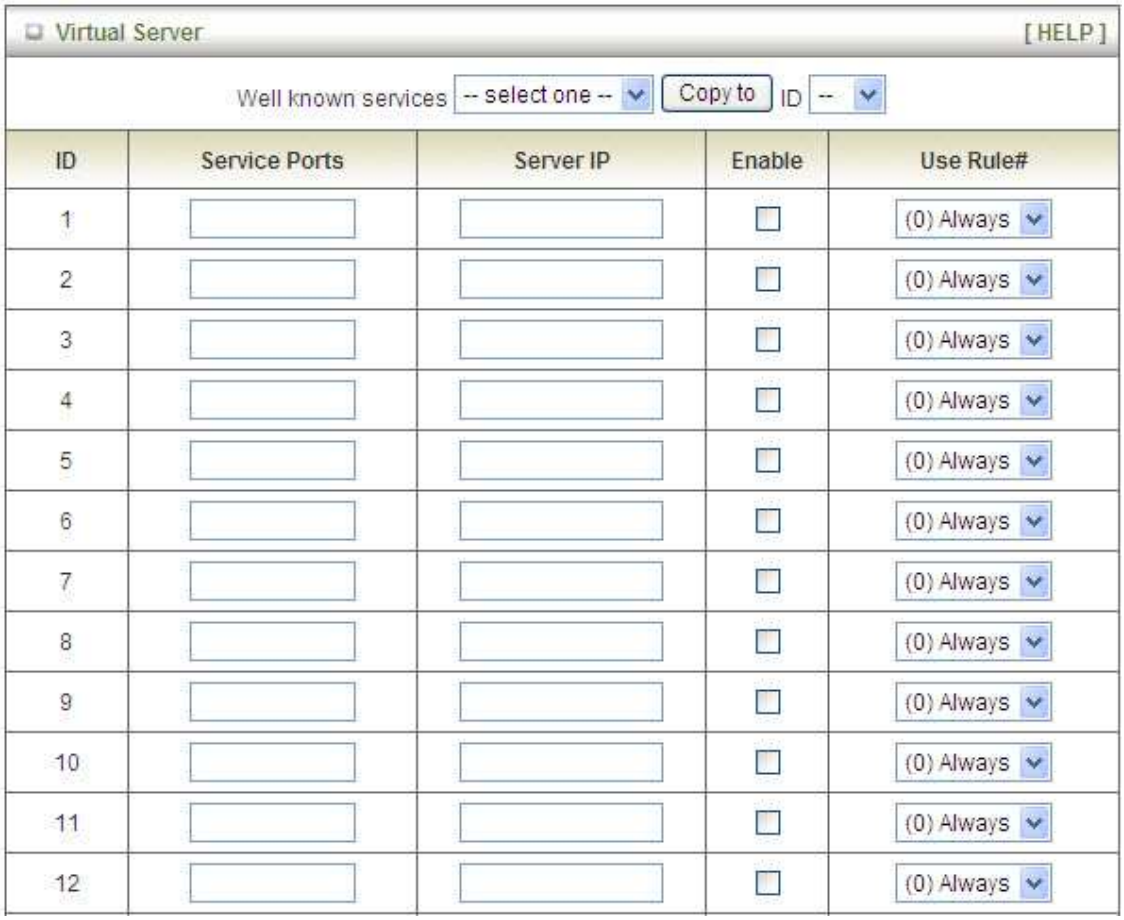
You can change Password here. We **strongly** recommend you to change the system password for security reason.

Click on “Save” to store your setting or “Undo” to give up

3.2.2 Forwarding Rules


FORWARDING RULES
Virtual Server
- Allows others to access WWW, FTP, and other services on your LAN.
Special Application
- This configuration allows some applications to connect, and work with the NAT router.
Miscellaneous
- IP Address of DMZ Host: Allows a computer to be exposed to unrestricted 2-way communication. Note that, this feature should be used only when needed.
- UPnP Setting: If you enable UPnP function, the router will work with UPnP devices/softwares.

Virtual Server



This product's NAT firewall filters out unrecognized packets to protect your Intranet, so all hosts behind this product are invisible to the outside world. If you wish, you can make some of them accessible by enabling the Virtual Server Mapping.

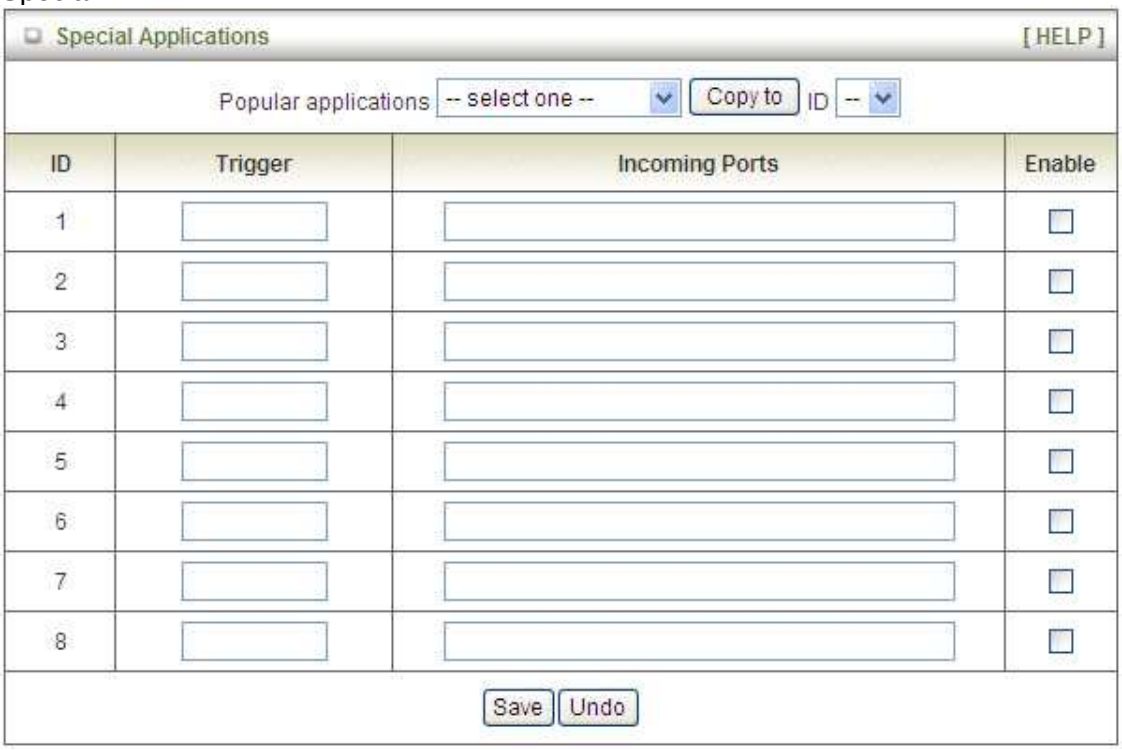
A virtual server is defined as a **Service Port**, and all requests to this port will be redirected to the computer specified by the **Server IP. Virtual Server** can work with **Scheduling Rules**, and give user more flexibility on Access control. For Detail, please refer to **Scheduling Rule**.

For example, if you have an FTP server (port 21) at 192.168.123.1, a Web server (port 80) at 192.168.123.2, and a VPN server at 192.168.123.6, then you need to specify the following virtual server mapping table:

Service Port	Server IP	Enable
21	192.168.123.1	V
80	192.168.123.2	V
1723	192.168.123.6	V

Click on "Save" to store your setting or "Undo" to give up

Special AP



Some applications require multiple connections, like Internet games, Video conferencing, Internet telephony, etc. Because of the firewall function, these applications cannot work with a pure NAT

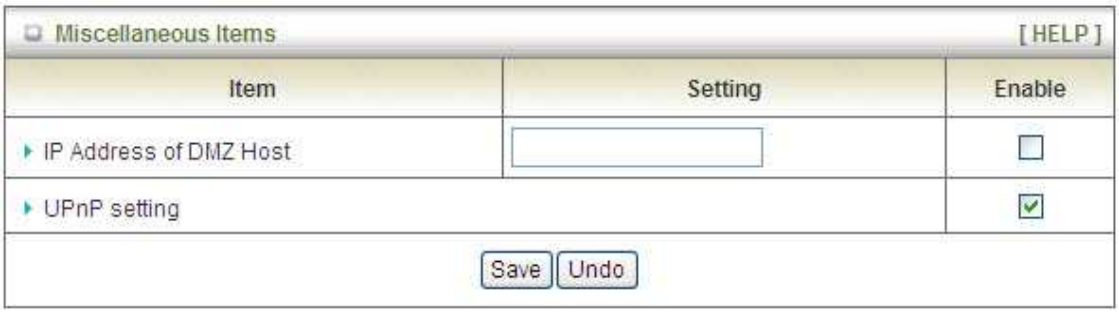
router. **The Special Applications** feature allows some of these applications to work with this product. If the mechanism of Special Applications fails to make an application work, try setting your computer as the DMZ host instead.

1. **Trigger:** the outbound port number issued by the application.
2. **Incoming Ports**: when the trigger packet is detected, the inbound packets sent to the specified port numbers are allowed to pass through the firewall.
   This product provides some predefined settings.

   Select your application and Click "**Copy to"** to add the predefined setting to your list.

Click on "Save" to store your setting or" Undo" to give up

Miscellaneous



1. **IP Address of DMZ Host**

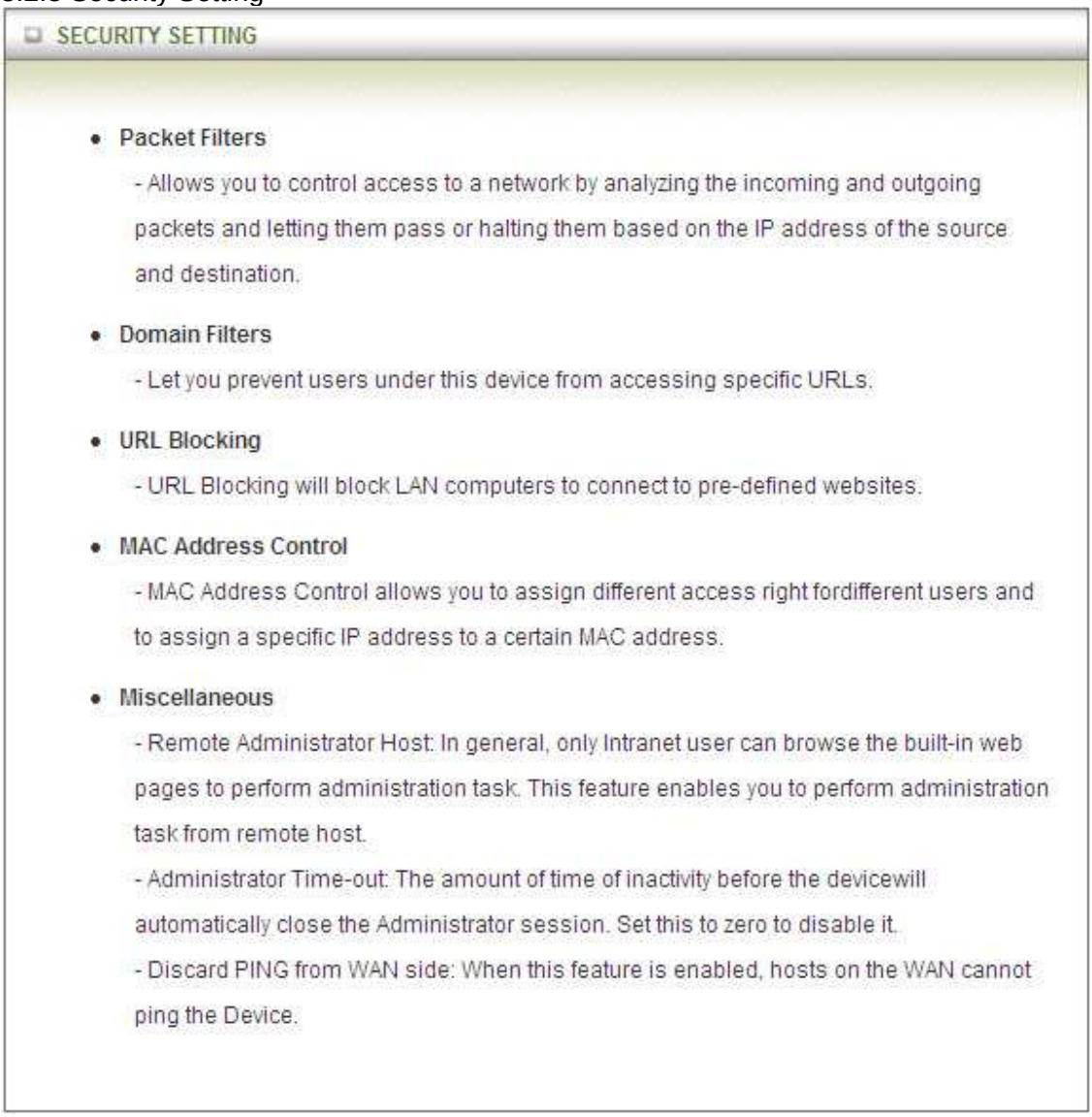
   DMZ (Demilitarized Zone) Host is a host without the protection of firewall. It allows a computer to be exposed to unrestricted 2-way communication for Internet games, Video conferencing, Internet telephony and other special applications.

2. **UPnP Setting**

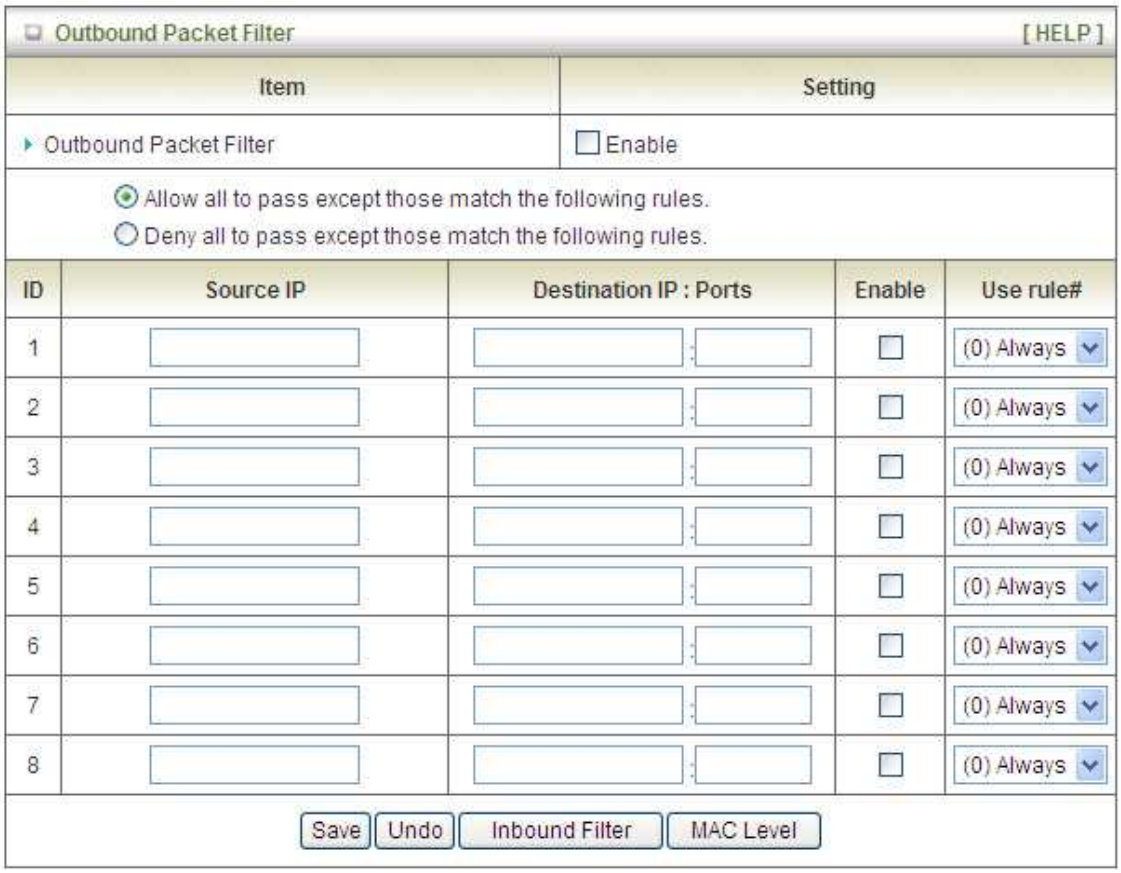
   The device also supports this function. If the OS supports this function enable it, like Windows XP. When the user gets IP from Device and will see icon as below:

Click on "Save" to store your setting or "Undo" to give up

3.2.3 Security Setting


SECURITY SETTING
Packet Filters
- Allows you to control access to a network by analyzing the incoming and outgoing packets and letting them pass or halting them based on the IP address of the source and destination.
Domain Filters
- Let you prevent users under this device from accessing specific URLs.
URL Blocking
- URL Blocking will block LAN computers to connect to pre-defined websites.
MAC Address Control
- MAC Address Control allows you to assign different access right fordifferent users and to assign a specific IP address to a certain MAC address.
Miscellaneous
- Remote Administrator Host: In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host.
- Administrator Time-out: The amount of time of inactivity before the devicewill automatically close the Administrator session. Set this to zero to disable it.
- Discard PING from WAN side: When this feature is enabled, hosts on the WAN cannot ping the Device.

Packet Filters



Packet Filter includes both outbound filter and inbound filter. And they have same way to setting. Packet Filter enables you to control what packets are allowed to pass the router. Outbound filter applies on all outbound packets. However, inbound filter applies on packets that destined to Virtual Servers or DMZ host only. You can select one of the two filtering policies:

1. Allow all to pass except those match the specified rules
2. Deny all to pass except those match the specified rules

You can specify 8 rules for each direction: inbound or outbound. For each rule, you can define the following:

- Source IP address
- Source port
- Destination IP address
- Destination port
- Protocol: TCP or UDP or both.
- Use Rule#

For source or destination IP address, you can define a single IP address (4.3.2.1) or a range of IP addresses (4.3.2.1-4.3.2.254). An empty implies all IP addresses.
For source or destination port, you can define a single port (80) or a range of ports (1000-1999). Add prefix "T" or "U" to specify TCP or UDP protocol. For example, T80, U53, U2000-2999, No prefix indicates both TCP and UDP are defined. An empty implies all port addresses. Packet Filter can work with **Scheduling Rules,** and give user more flexibility on Access control. For Detail, please refer to **Scheduling Rule.**
Each rule can be enabled or disabled individually.

Click on “Save” to store your setting or “Undo” to give up

Domain Filters

Domain Filter [HELP]

Item	Setting
Domain Filter	☐ Enable
Log DNS Query	☐ Enable
Privilege IP Addresses Range	From ☐ To ☐

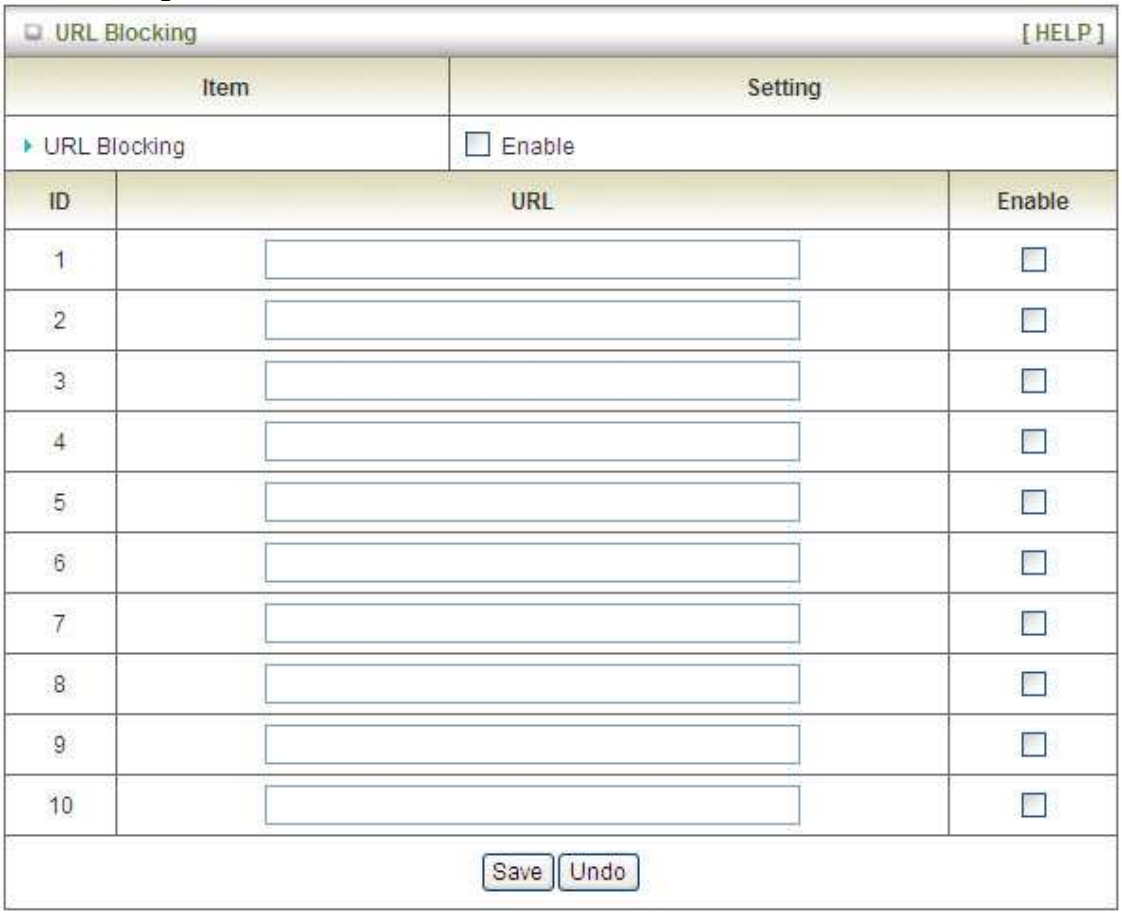
ID	Domain Suffix	Action	Enable
1	☐	☐ Drop ☐ Log	☐
2	☐	☐ Drop ☐ Log	☐
3	☐	☐ Drop ☐ Log	☐
4	☐	☐ Drop ☐ Log	☐
5	☐	☐ Drop ☐ Log	☐
6	☐	☐ Drop ☐ Log	☐
7	☐	☐ Drop ☐ Log	☐
8	☐	☐ Drop ☐ Log	☐
9	☐	☐ Drop ☐ Log	☐
10	* (all others)	☐ Drop ☐ Log	-

Save Undo

1. **Domain Filter**
   Let you prevent users under this device from accessing specific URLs.
2. **Domain Filter Enable**
   Check if you want to enable Domain Filter.
3. **Log DNS Query**
   Check if you want to log the action when someone accesses the specific URLs.
4. **Privilege IP Address Range**
   Setting a group of hosts and privilege these hosts to access network without restriction.
5. **Domain Suffix**
   A suffix of URL can be restricted, for example, ".com", "xxx.com".
6. **Action**
   When someone is accessing the URL met the domain-suffix, what kind of action you want. Check drop to block the access. Check “log” to log these access.
7. **Enable**
   Check to enable each rule.

Click on “Save” to store your setting or “Undo” to give up

URL Blocking

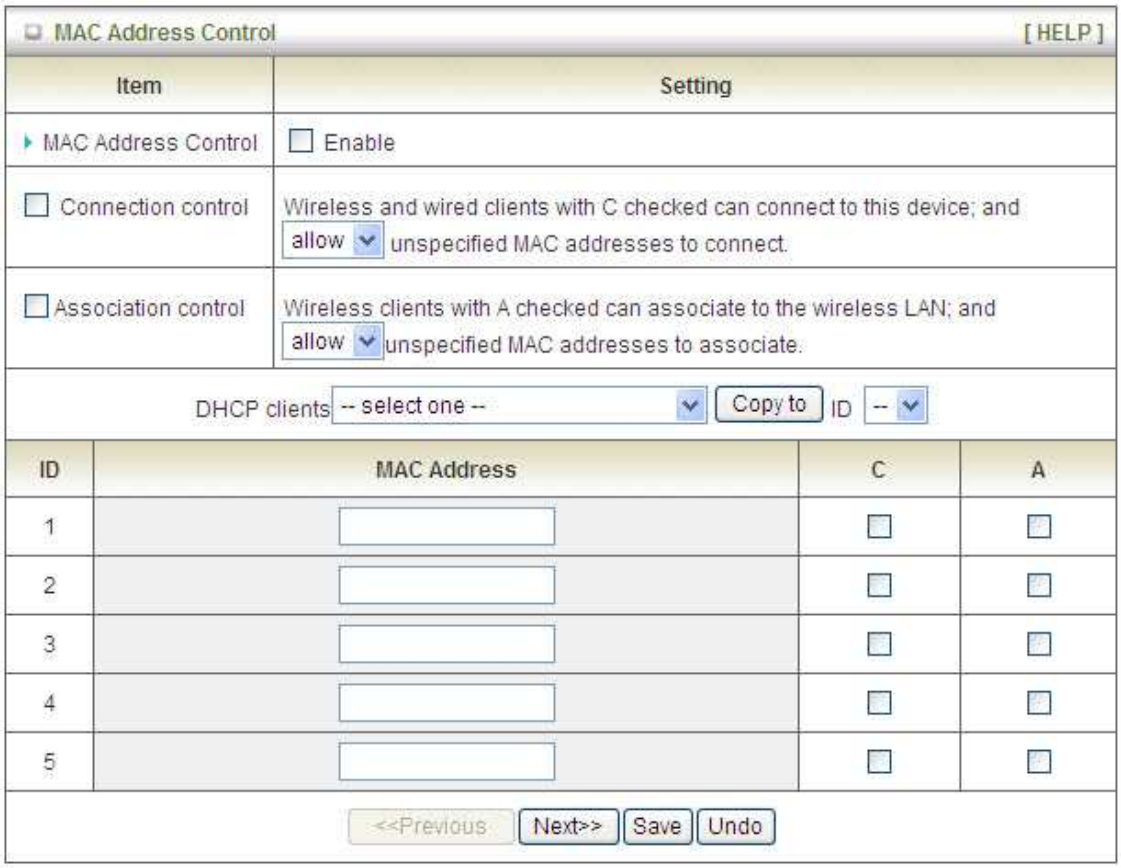


URL Blocking will block LAN computers to connect with pre-define Websites. The major difference between “Domain filter” and “URL Blocking” is Domain filter require user to input suffix (like .com or .org, etc), while URL Blocking require user to input a keyword only. In other words, Domain filter can block specific website, while URL Blocking can block hundreds of websites by simply a **keyword**.

1. **URL Blocking Enable**
   Check if you want to enable URL Blocking.
2. **URL**
   If any part of the Website's URL matches the pre-defined word, the connection will be blocked.
   For example, you can use pre-defined word "sex" to block all websites if their URLs contain pre-defined word "sex".
3. **Enable**
   Check to enable each rule.

Click on “Save” to store your setting or “Undo” to give up

MAC Control



MAC Address Control allows you to assign different access right for different users and to assign a specific IP address to a certain MAC address.

1. **MAC Address Control**

   Check “Enable” to enable the “MAC Address Control”. All of the settings in this page will take effect only when “Enable” is checked.

2. **Connection control**

   Check "Connection control" to enable the controlling of which wired and wireless clients can connect with this device. If a client is denied to connect with this device, it means the client can't access to the Internet either. Choose "allow" or "deny" to allow or deny the clients, whose MAC addresses are not in the "Control table" (please see below), to connect with this device.

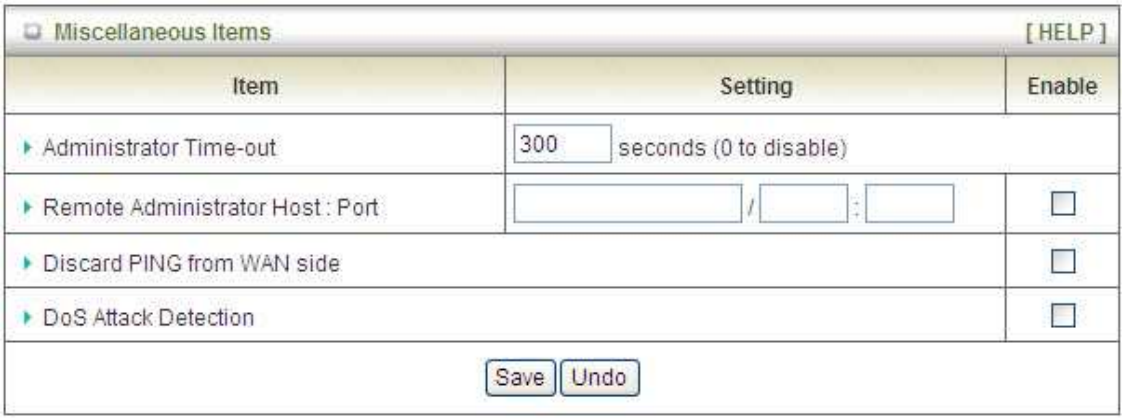
3. **Association control**

   Check "Association control" to enable the controlling of which wireless client can associate to the wireless LAN. If a client is denied to associate to the wireless LAN, it means the client can't send or receive any data via this device. Choose "allow" or "deny"

to allow or deny the clients, whose MAC addresses are not in the "Control table", to associate to the wireless LAN

Click “Save” to store your setting or “Undo” to give up

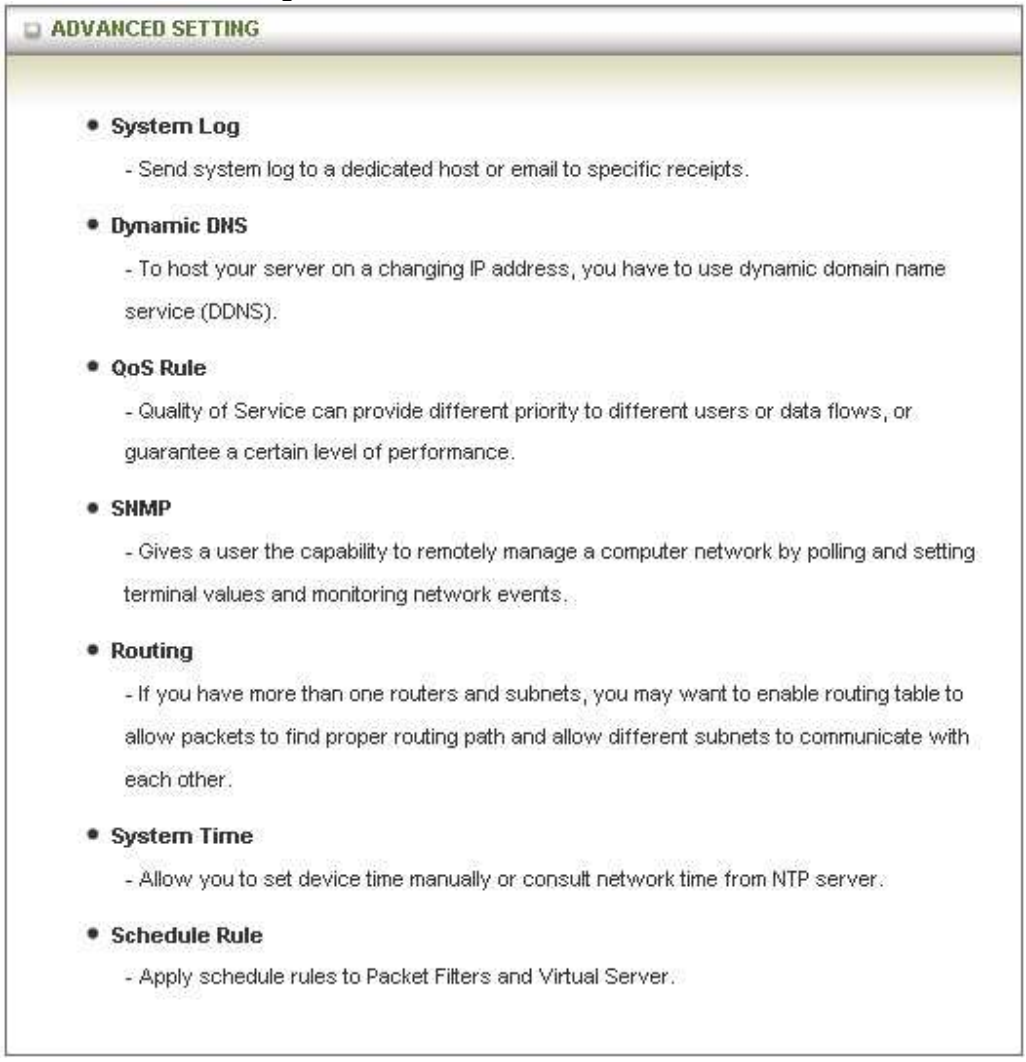
Miscellaneous



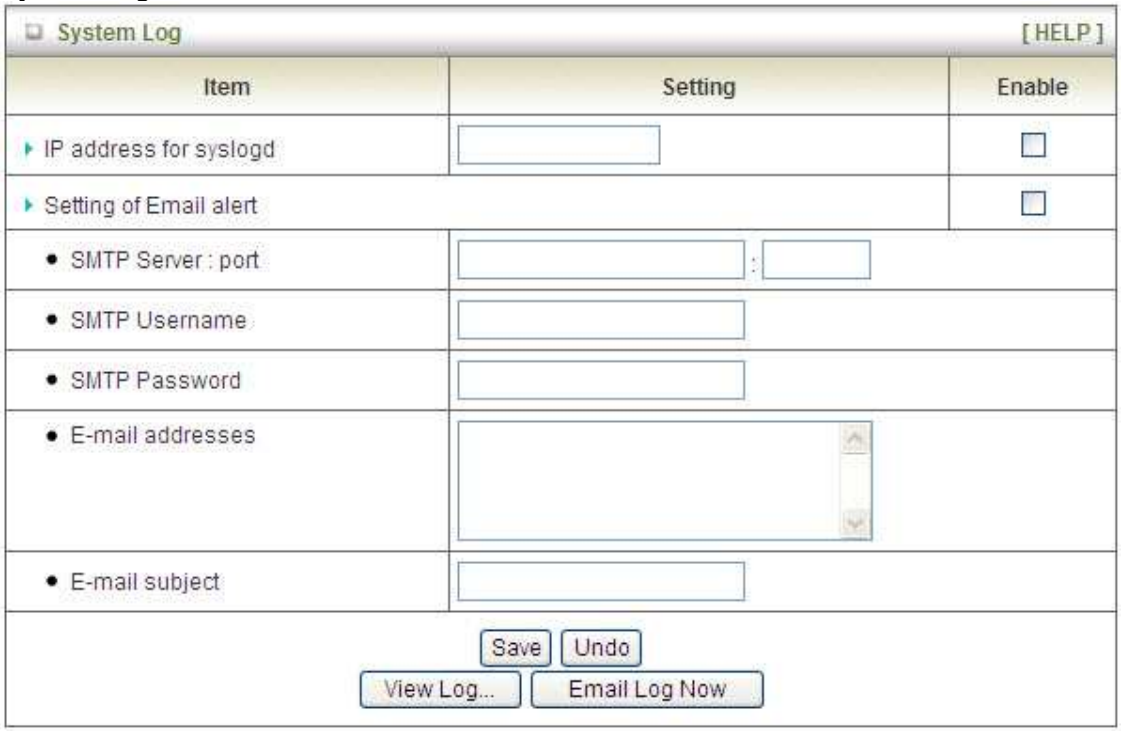
1. **Administrator Time-out**
   The time of no activity to logout automatically, you may set it to zero to disable this feature.
2. **Remote Administrator Host/Port**
   In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host. If this feature is enabled, only the specified IP address can perform remote administration. If the specified IP address is 0.0.0.0, any host can connect with this product to perform administration task. You can use subnet mask bits "/nn" notation to specified a group of trusted IP addresses for example, "10.1.2.0/24".
   NOTE: When Remote Administration is enabled, the web server port will be shifted to 80. You can change web server port to other port, too.
3. **Discard PING from WAN side**
   When this feature is enabled, any host on the WAN cannot ping this product.
4. **DoS Attack Detection**
   When this feature is enabled, the router will detect and log the DoS attack comes from the Internet. Currently, the router can detect the following DoS attack: SYN Attack, WinNuke, Port Scan, Ping of Death, Land Attack etc.

Click on “Save” to store your setting or” Undo” to give up

3.2.4 Advanced Settings


ADVANCED SETTING
System Log
- Send system log to a dedicated host or email to specific receipts.
Dynamic DNS
- To host your server on a changing IP address, you have to use dynamic domain name service (DDNS).
QoS Rule
- Quality of Service can provide different priority to different users or data flows, or guarantee a certain level of performance.
SNMP
- Gives a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.
Routing
- If you have more than one routers and subnets, you may want to enable routing table to allow packets to find proper routing path and allow different subnets to communicate with each other.
System Time
- Allow you to set device time manually or consult network time from NTP server.
Schedule Rule
- Apply schedule rules to Packet Filters and Virtual Server.

System Log



This page support two methods to export system logs to specific destination by means of syslog (UDP) and SMTP(TCP). The items you have to setup including:

IP Address for Sys log

Host IP of destination where sys log will be sent to.

Check **Enable** to enable this function.

Setting of E-mail Alert

Check if you want to enable Email alert (send syslog via email).

SMTP Server IP and Port

Input the SMTP server IP and port, which are connected with ':'. If you do not specify port number, the default value is 25.

For example, "mail.your_url.com" or "192.168.1.100:26".

SMTP Username and Password

Input a user account and password for the SMTP server.

E-mail address

The recipients who will receive these logs, you can assign more than 1 recipient, using ';' or ',' to separate these email addresses.

E-mail Subject

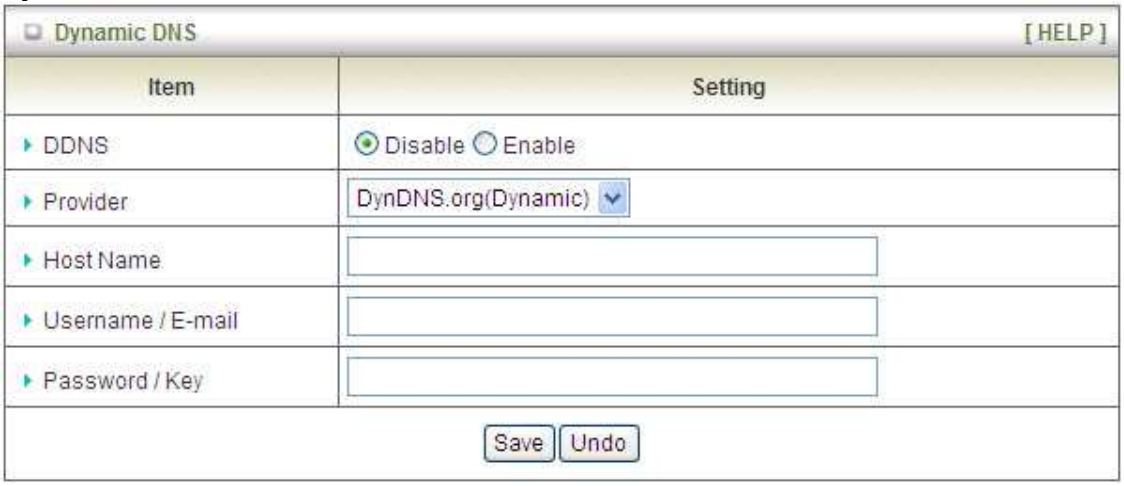
The subject of email alert, this setting is optional.

View Log…

Reference the section Toolbox/System Info.

Click on “Save” to store your setting or “Undo” to give up

Dynamic DNS



To host your server on a changing IP address, you have to use dynamic domain name service (DDNS).

So that anyone wishing to reach your host only needs to know the name of it. Dynamic DNS will map the name of your host to your current IP address, which changes each time you connect your Internet service provider.

Before you enable **Dynamic DNS**, you need to register an account on one of these Dynamic DNS servers that we list in **provider** field.

To enable **Dynamic DNS** click the check box next to **Enable** in the **DDNS** field.

Next you can enter the appropriate information about your Dynamic DNS Server.

You have to define:

Provider

Host Name

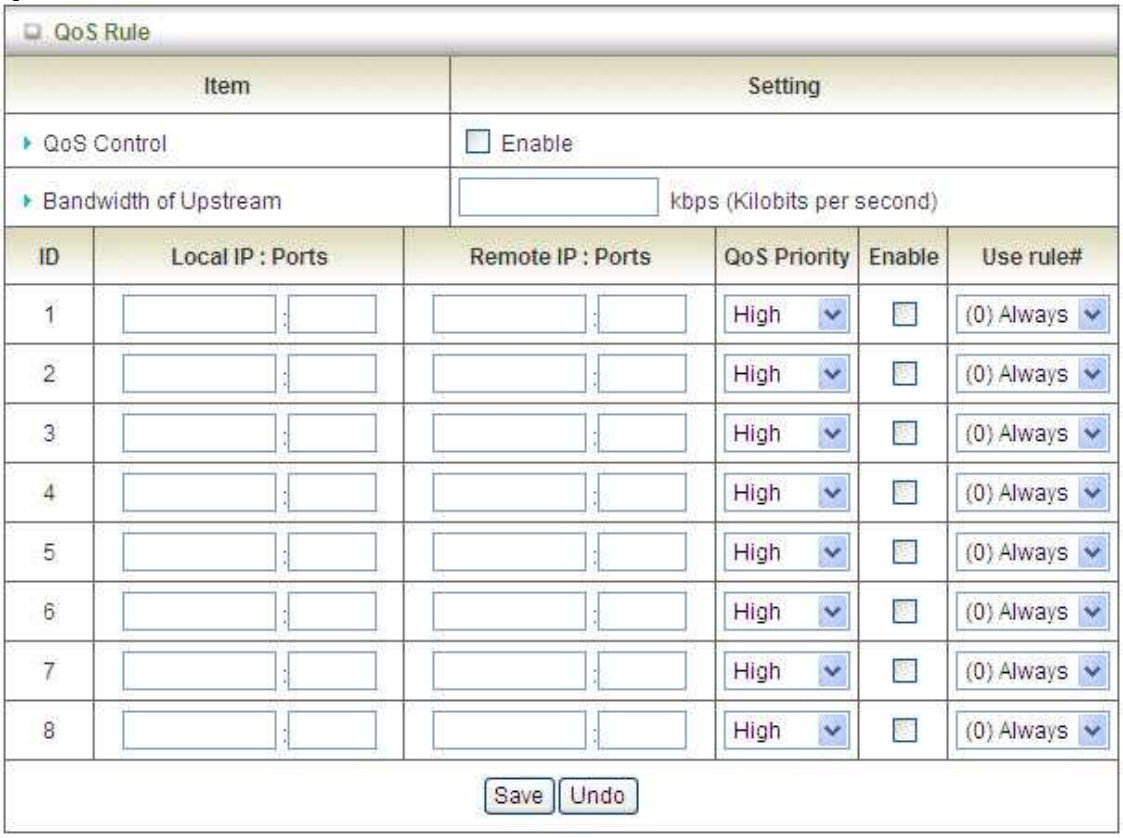
Username/E-mail

Password/Key

You will get this information when you register an account on a Dynamic DNS server.

Click on “Save” to store your setting or “Undo” to give up

QOS



Provide different priority to different users or data flows, or guarantee a certain level of performance.

Enable

This Item enables QoS function or not.

Bandwidth of Upstream

Set the limitation of upstream speed.

Local: IP

Define the Local IP address of packets here.

Local: Ports

Define the Local port of the packets in this field.

Remote: IP

Define the Remote IP address of packets here.

Remote: Ports

Define the Remote port of the packets in this field.

QoS Priority

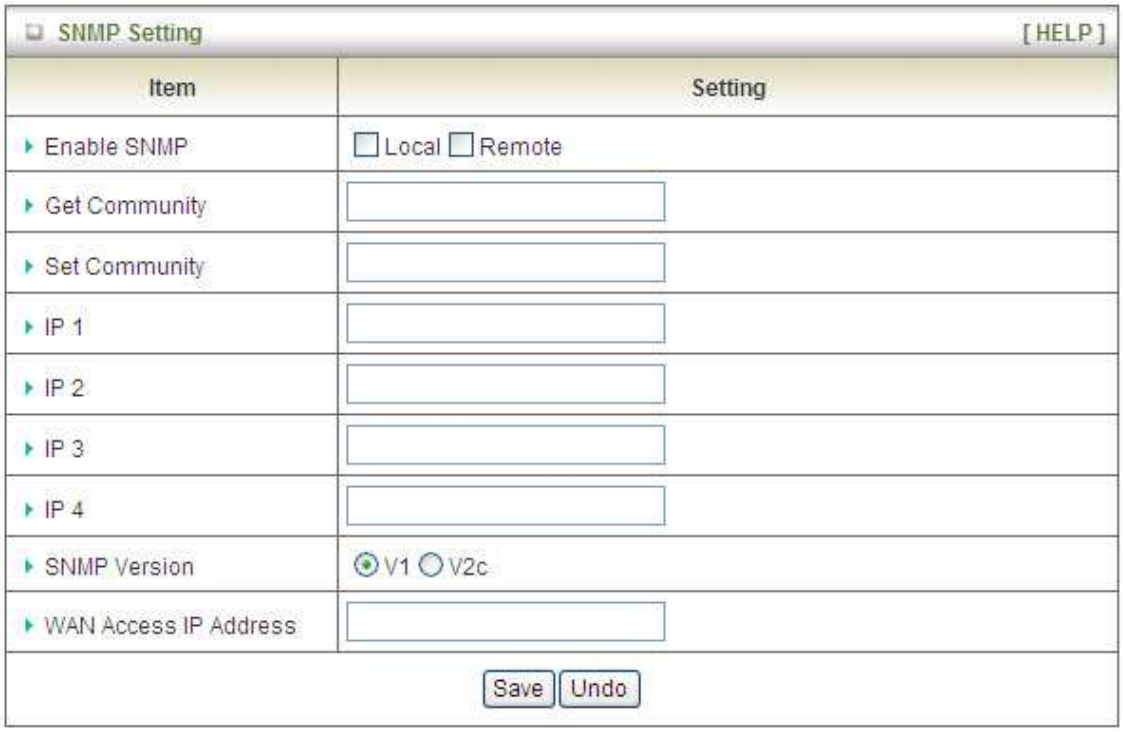
This defines the priority level of the current Policy Configuration. Packets associated with this policy will be serviced based upon the priority level set. For critical applications High or Normal levels are recommended. For non-critical applications select a Low level.

User Rule#

The QoS item can work with Scheduling Rule number#. Please reference the section Advanced setting/schedule Rule.

Click on “Save” to store your setting or “Undo” to give up

SNMP



In brief, SNMP, the Simple Network Management Protocol, is a protocol designed to give a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.

Enable SNMP

You must check Local, Remote or both to enable SNMP function. If Local is checked, this device will response request from LAN. If Remote is checked, this device will response request from WAN.

Get Community

Setting the community of GetRequest your device will response.

Set Community

Setting the community of SetRequest your device will accept.

IP 1, IP 2, IP 3, IP 4

Input your SNMP Management PC's IP here. User has to configure to where this device should send SNMP Trap message.

SNMP Version

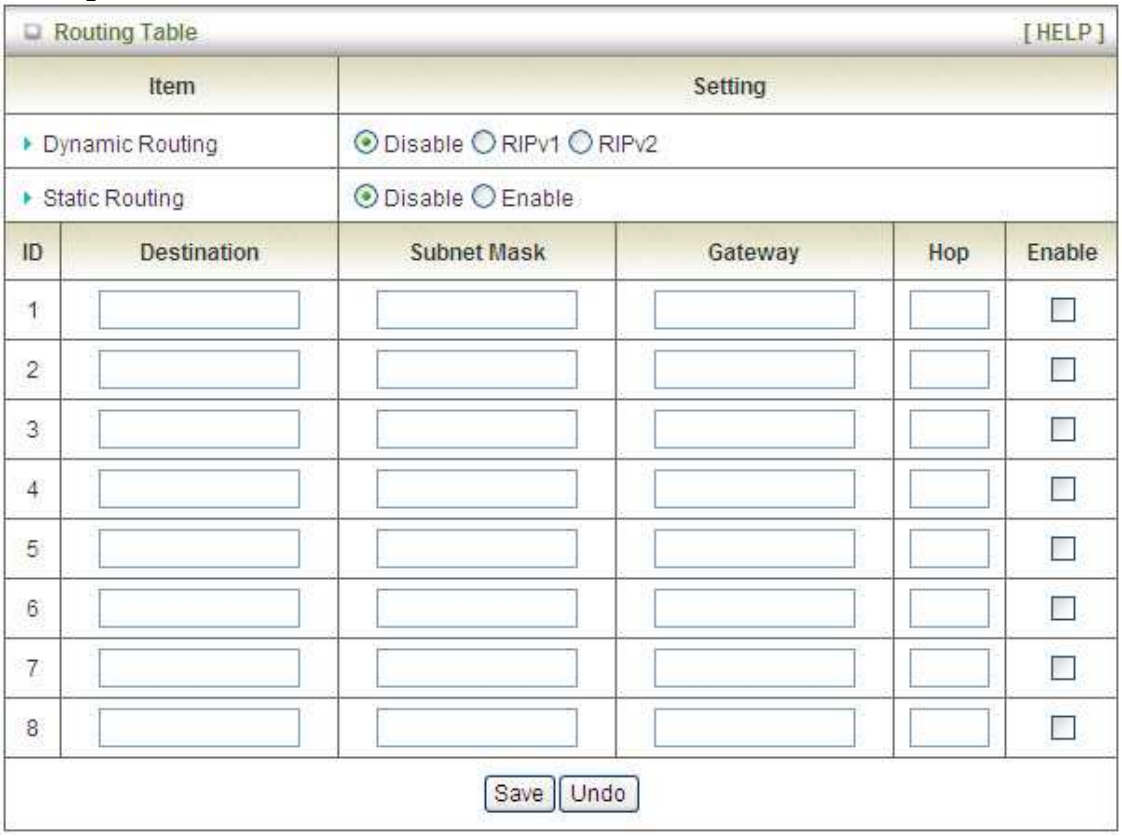
Please select proper SNMP Version that your SNMP Management software supports.

WAN Access IP Address

If the user wants to limit to specific the IP address to access, please input in the item. The default 0.0.0.0 and means every IP of Internet can get some information of device with SNMP protocol.

Click on “Save” to store your setting or “Undo” to give up.

Routing



Routing Tables

Allow you to determine which physical interface address to use for outgoing IP data grams. If you have more than one routers and subnets, you will need to enable routing table to allow packets to find proper routing path and allow different subnets to communicate with each other.
Routing Table settings are settings used to setup the functions of static and dynamic routing.

Dynamic Routing

Routing Information Protocol (RIP) will exchange information about destinations for computing routes throughout the network. Please select RIPv2 only if you have different subnet in your network. Otherwise, please select RIPv1 if you need this protocol.

Static Routing

For static routing, you can specify up to 8 routing rules. You can enter the destination IP address, subnet mask, gateway, hop for each routing rule, and then enable or disable the rule by checking or un-checking the Enable checkbox.

Click on “Save” to store your setting or “Undo” to give up.

System Time

Time Zone

Select a time zone where this device locates.

Auto-Synchronization

Select the “Enable” item to enable this function.

Time Server

Select a NTP time server to consult UTC time

Sync with Time Server

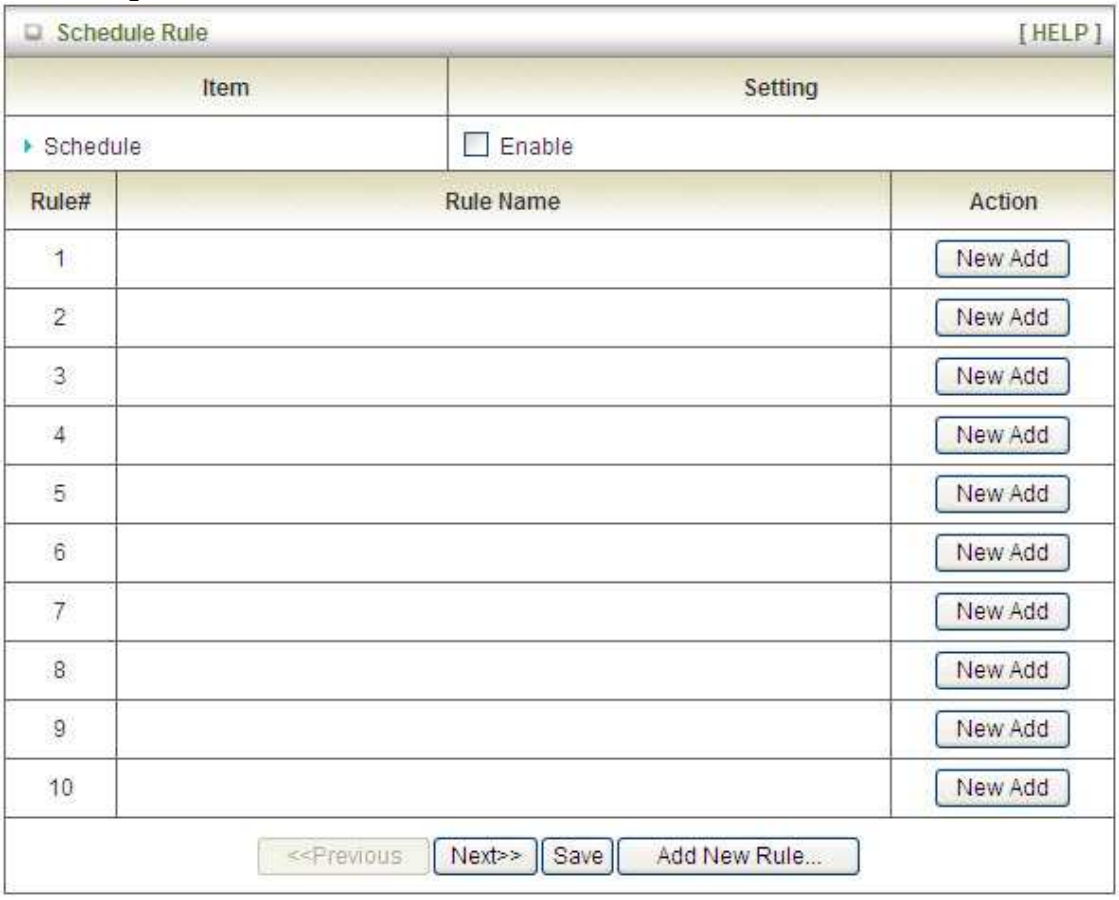
Select if you want to set Date and Time by NTP Protocol.

Sync with my PC

Select if you want to set Date and Time using PC’s Date and Time

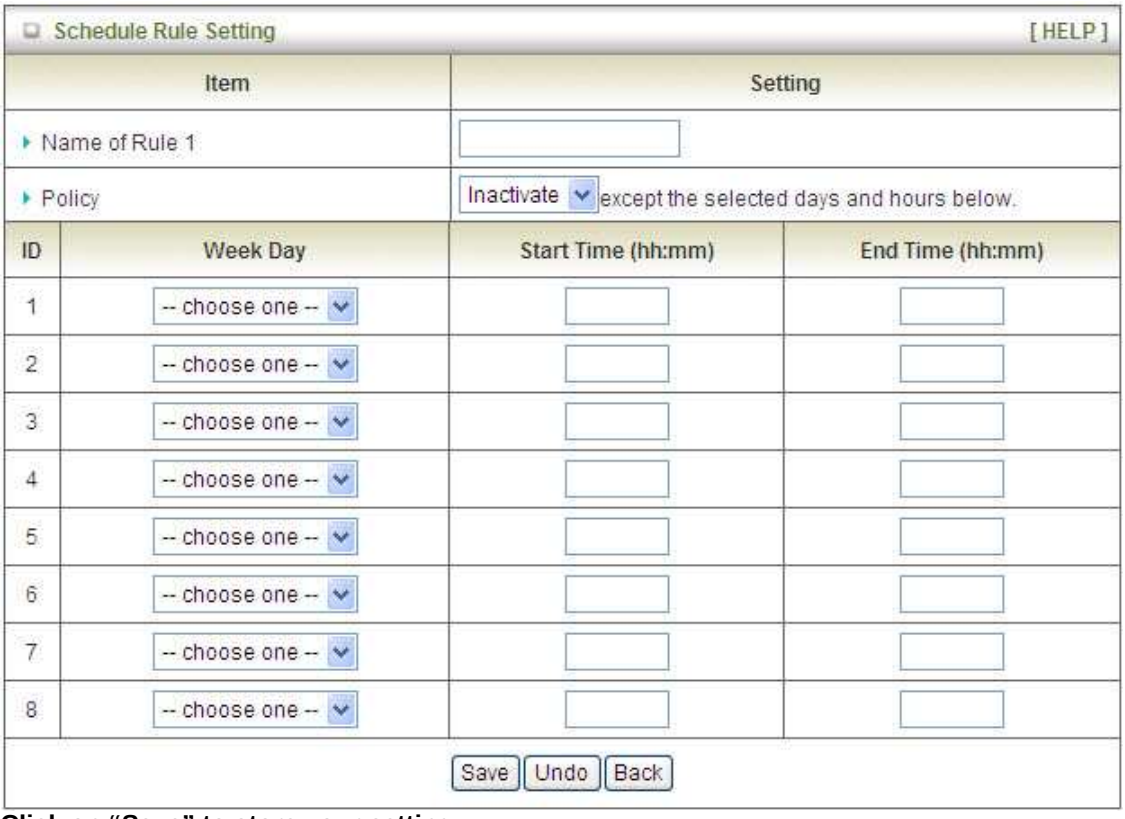
Click on “Save” to store your setting or “Undo” to give up.

Scheduling



You can set the schedule time to decide which service will be turned on or off.

Select the “Enable” item. Press “Add New Rule” You can write a rule name and set which day and what time to schedule from “Start Time” to “End Time”. The following example configure “ftp time” as everyday 14:10 to 16:20

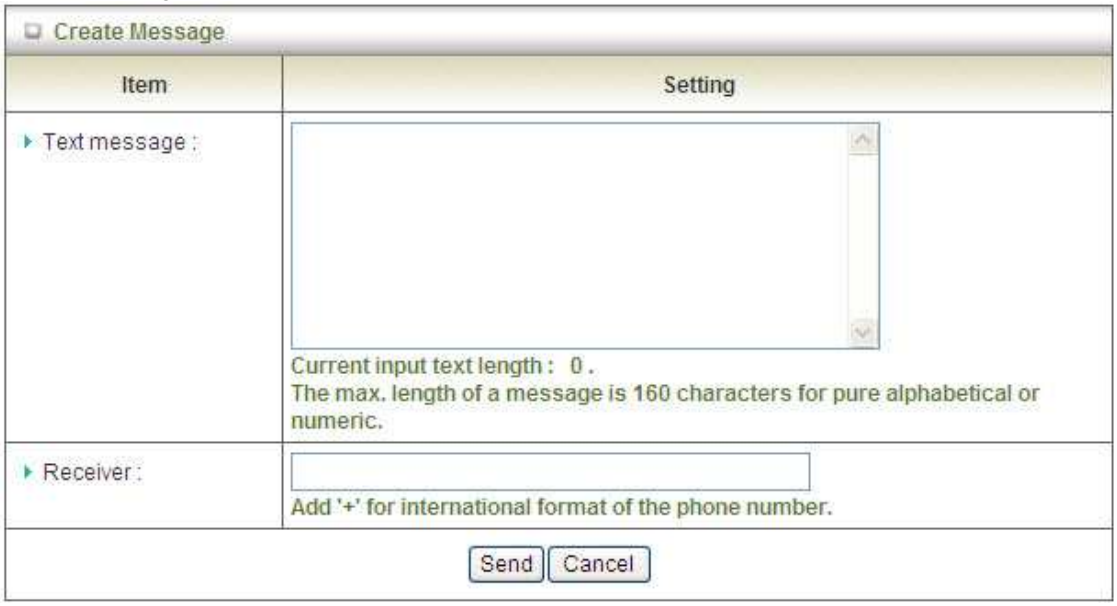


Click on “Save” to store your setting.

3.2.5 SMS

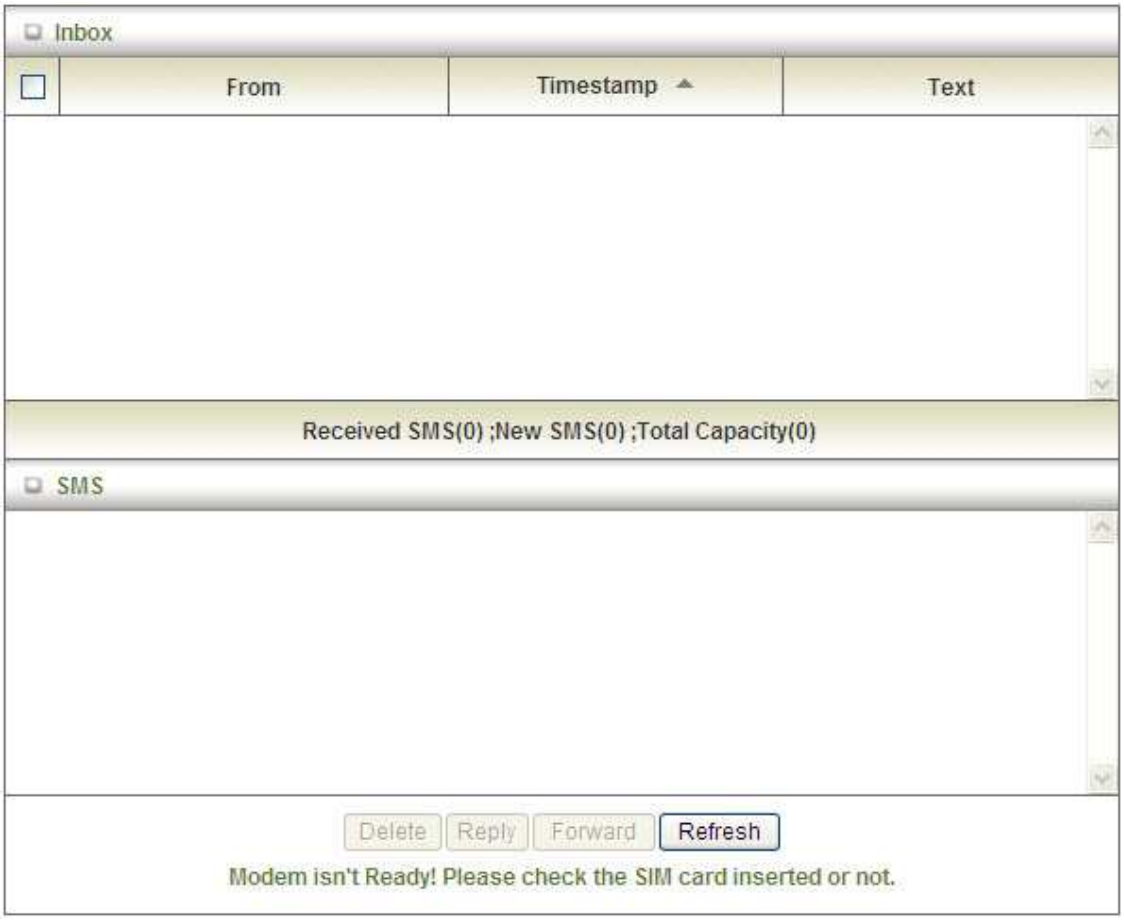
SMS
Create Message
- Allow you to create and send new SMS message.
inbox
- Allow you to read new SMS message, and delete/forward existed message.

Create Message


Create Message
Item
Setting
Text message :
Current input text length : 0 .
The max. length of a message is 160 characters for pure alphabetical or numeric.
Receiver :
Add '+' for international format of the phone number.
Send
Cancel

You can create a new SMS message on this page. After finishing content of message, and filling with phone number of receiver(s), pressing send button to send this message out. You can see “Send OK” if the new message has been sent successfully.

Inbox

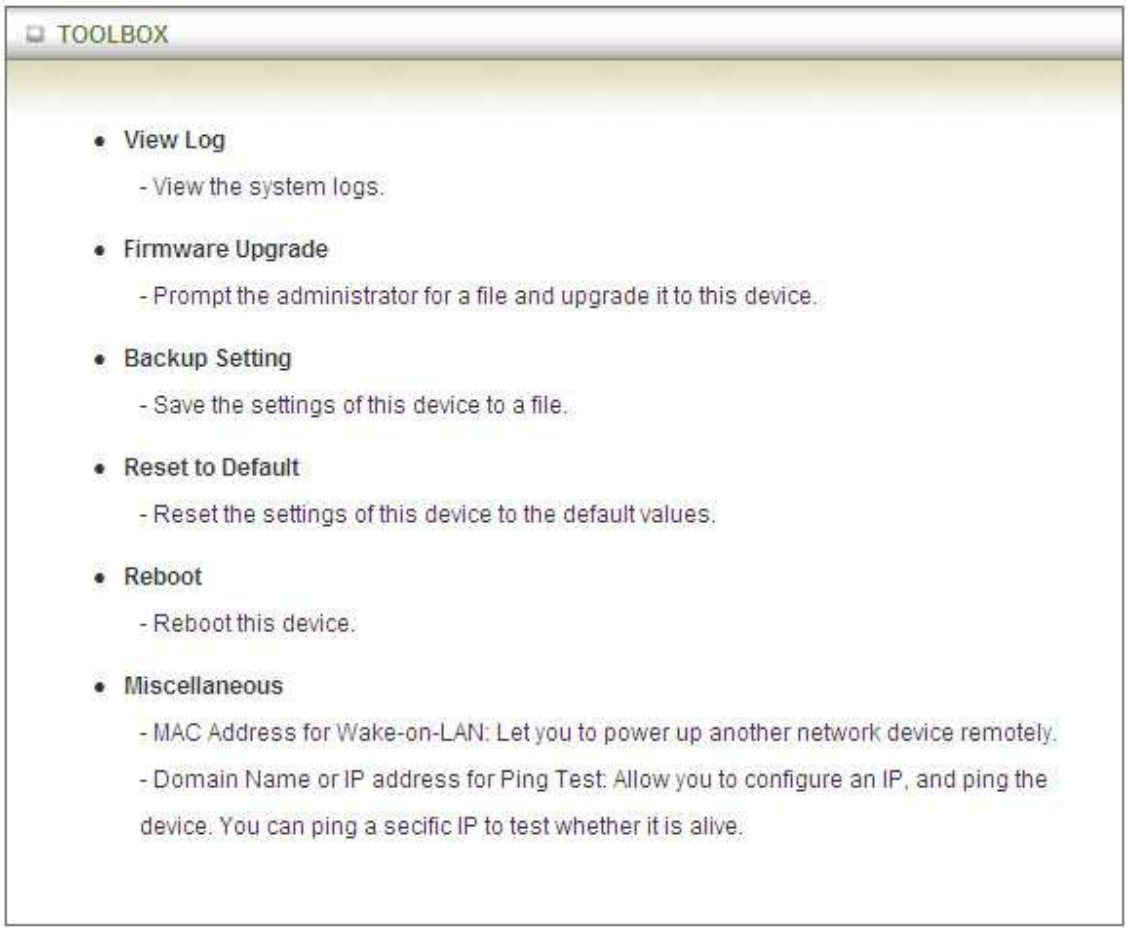


You can read, delete, reply, and forward messages. Just click on one from the SMS lists, then you can view the whole content of it in the SMS window below.

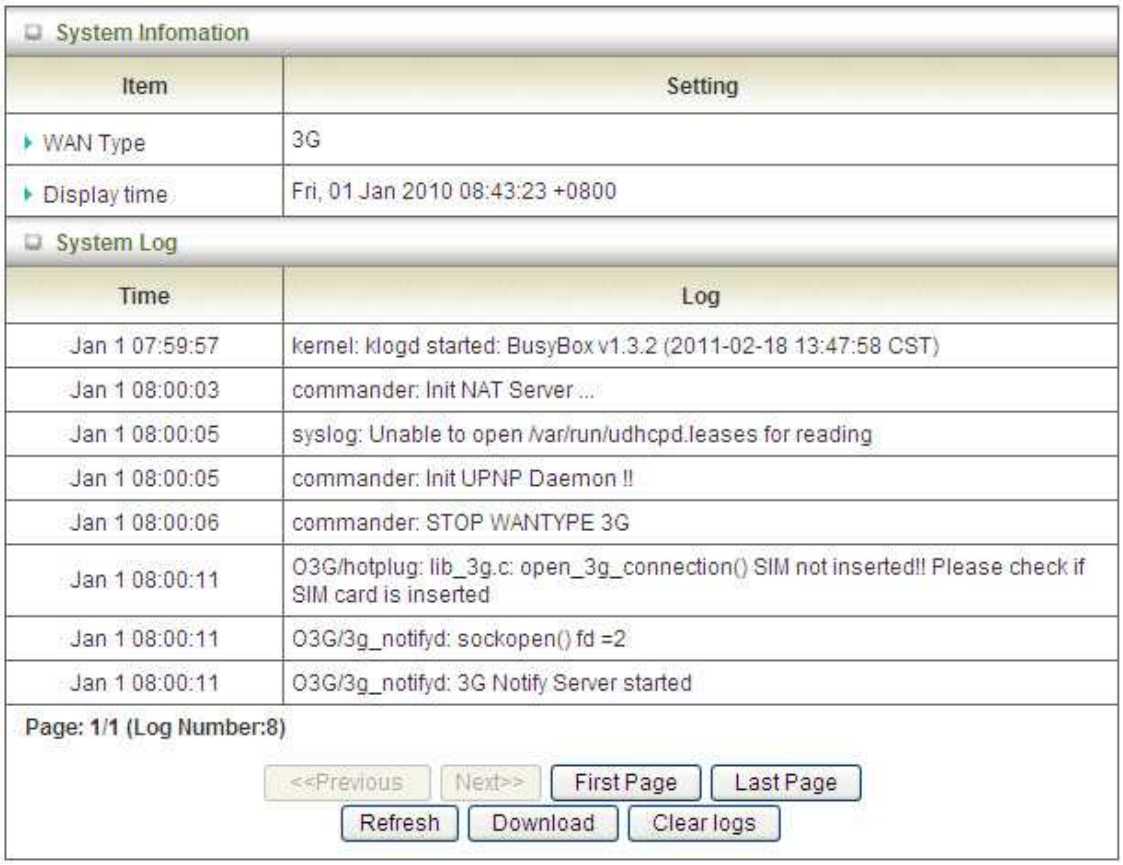
Refresh:
You can press “Refresh” button to renew SMS lists.

Delete, Reply, Forward Messages:
After reading message, you can check the checkbox on the left of each message to delete, reply, or forward this message.

3.2.6 Tool Box


TOOLBOX
View Log
- View the system logs.
Firmware Upgrade
- Prompt the administrator for a file and upgrade it to this device.
Backup Setting
- Save the settings of this device to a file.
Reset to Default
- Reset the settings of this device to the default values.
Reboot
- Reboot this device.
Miscellaneous
- MAC Address for Wake-on-LAN: Let you to power up another network device remotely.
- Domain Name or IP address for Ping Test: Allow you to configure an IP, and ping the device. You can ping a secific IP to test whether it is alive.

System Info



You can view the System Information and System log, and download/clear the System log, in this page.

Firmware Upgrade

Firmware Upgrade
Firmware Filename
瀏覽...
Current firmware version is R2.02d0.
Note! Do not interrupt the process or power off the unit when it is being upgraded.
When the process is done successfully, the unit will be restarted automatically.
Accept unofficial firmware.
Upgrade
Cancel

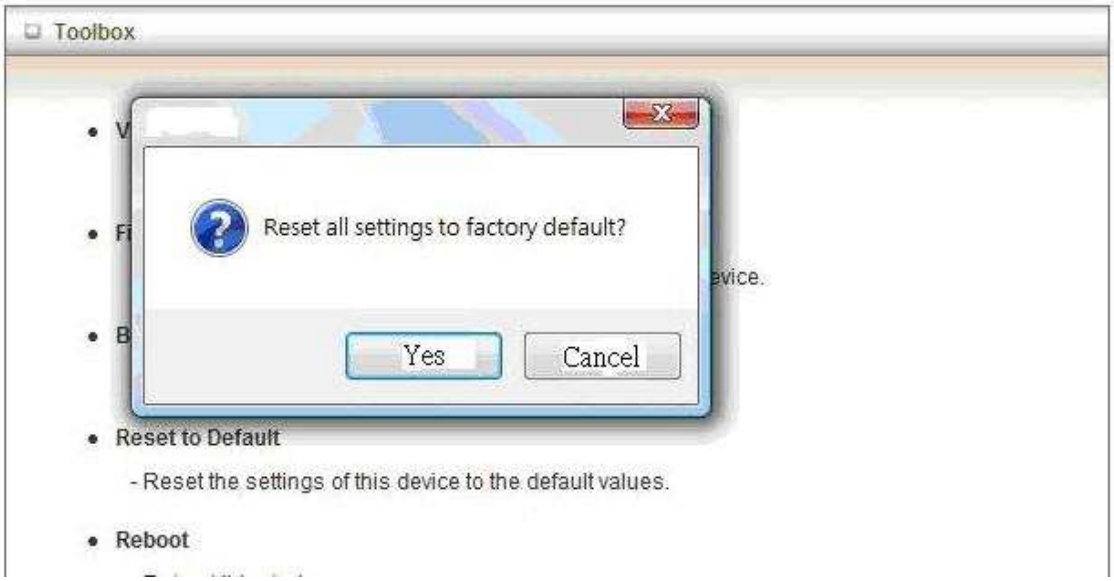
You can upgrade firmware by clicking “Upgrade” button.

Backup Setting

Firmware Upgrade
Firmware Filename
File Download
Do you want to save this file, or find a program online to open it?
Name: config.bin
Type: Unknown File Type, 586 bytes
From: 192.168.123.254
Find
Save
Cancel
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not find a program to open this file or save this file. What's the risk?

You can backup your settings by clicking the “**Backup Setting”** button and save it as a bin file. Once you want to restore these settings, please click Firmware Upgrade button and use the bin file you saved.

Reset to Default

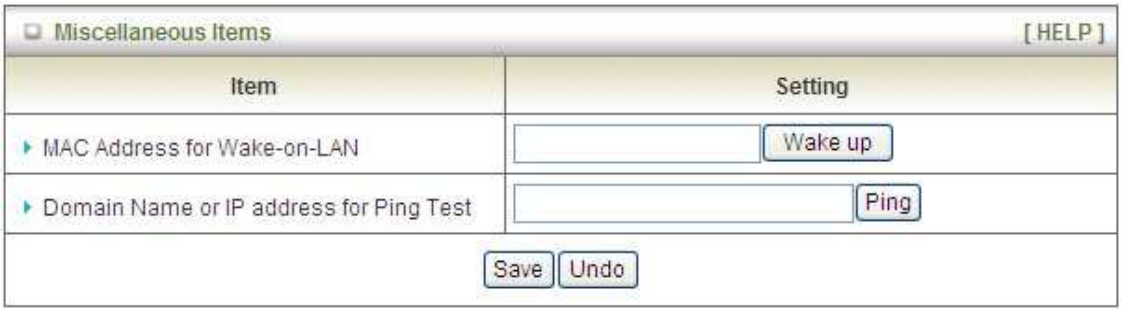


You can also reset this product to factory default by clicking the **Reset to default** button.

Reboot

You can also reboot this it by clicking the **Reboot** button.

Miscellaneous



Domain Name or IP address for Ping Test

Allow you to configure an IP, and ping the device. You can ping a specific IP to test whether it is alive.

Chapter 4 Troubleshooting

This Chapter provides solutions to problems for the installation and operation of the WiFi HSPA+ ROUTER. You can refer to the following if you are having problems.

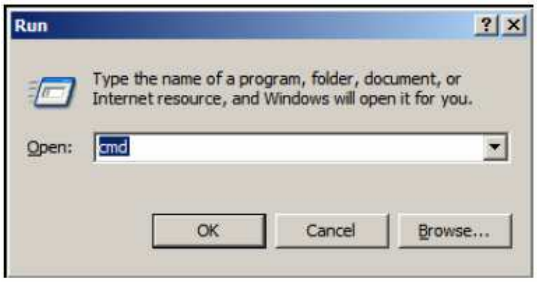
1 Why can't I configure the router even the cable is plugged and the LED is lit?

Do a **Ping test** to make sure that the WiFi HSPA+ ROUTER.

Note: It is recommended that you use an Ethernet connection to configure it.

Go to **Start > Run**.

1. Type **cmd**.



2. Press **OK.**
3. Type **ipconfig** to get the IP of default gateway.
4. Type "**ping 192.168.123.254".** Assure that you ping the correct IP Address assigned to the WiFi HSPA+ IAD/ROUTER. It will show four replies if you ping correctly.

```
Pinging 192.168.123.254 with 32 bytes of data:

Reply from 192.168.123.254: bytes=32 time<1ms TTL=64
Reply from 192.168.123.254: bytes=32 time<1ms TTL=64
Reply from 192.168.123.254: bytes=32 time<1ms TTL=64
Reply from 192.168.123.254: bytes=32 time<1ms TTL=64
```

Ensure that your Ethernet Adapter is working, and that all network drivers are installed properly. Network adapter names will vary depending on your specific adapter. The installation steps listed below are applicable for all network adapters.

1. Go to **Start > Right click on "My Computer" > Properties**.
2. **Select** the **Hardware Tab**.
3. Click **Device Manager**.
4. Double-click on "**Network Adapters"**.
5. Right-click on **Wireless Card bus Adapter** or **your specific network adapter**.
6. Select **Properties** to ensure that all drivers are installed properly.
7. Look under **Device Status** to see if the device is working properly.

8. Click “**OK”**.

2 What can I do if my Ethernet connection does not work properly?

A. Make sure the RJ45 cable connect with the router.

B. Ensure that the setting on your Network Interface Card adapter is “Enabled”.

C. If settings are correct, ensure that you are not using a crossover Ethernet cable, not all Network Interface Cards are MDI/MDIX compatible, and use a patch cable is recommended.

D. If the connection still doesn’t work properly, then you can reset it to default.

3 Problems with 3G connection?

A. What can I do if the 3G connection is failed by Auto detection?

Maybe the device can’t recognize your ISP automatically. Please select “Manual” mode, and filling in dial-up settings manually.

B. What can I do if my country and ISP are not in the list?

Please choose “Others” item from the list, and filling in dial-up settings manually.

C. What can I do if my 3G connection is failed even the dongle is plugged?

Please check the following items:

I. Make sure you have inserted a validated SIM card in the 3G data card, and the subscription from ISP is still available

II. If you activate PIN code check feature in SIM card, making sure the PIN code you fill in dial-up page is correct

III. Checking with your ISP to see all dial-up settings are correct

IV. Make sure 3G signal from your ISP is available in your environment

D. What can I do if my router can’t recognize my 3G data card even it is plugged?

There might be compatibility issue with some certain 3G cards. Please check the latest compatibility list to see if your 3G card is already supported.

E. What should I insert in APN, PIN Code, Account, Password, Primary DNS, and Secondary DNS?

The device will show this information after you choose country and Telcom. You can also check these values with your ISP.

F. Which 3G network should I select?

It depends on what service your ISP provide. Please check your ISP to know this information.

G. Why my 3G connection is keep dropping?

Please check 3G signal strength from your ISP in your environment is above middle

level.

4 Something wrong with the wireless connection?

A. Can't setup a wireless connection?

I. Ensure that the SSID and the encryption settings are exactly the same to the Clients.

II. Move the WiFi HSPA+ IAD/ROUTER and the wireless client into the same room, and then test the wireless connection.

III. Disable all security settings such as **WEP**, and **MAC Address Control**.

IV. Turn off the WiFi HSPA+ IAD/ROUTER and the client, then restart it and then turn on the client again.

V. Ensure that the LEDs are indicating normally. If no, make sure that the AC power and Ethernet cables are firmly connected.

VI. Ensure that the IP Address, subnet mask, gateway and DNS settings are correctly entered for the network.

VII. If you are using other wireless device, home security systems or ceiling fans, lights in your home, your wireless connection may degrade dramatically. Keep your product away from electrical devices that generate RF noise such as microwaves, monitors, electric motors…

B. What can I do if my wireless client can not access the Internet?

I. Out of range: Put the router closer to your client.

II. Wrong SSID or Encryption Key: Check the SSID or Encryption setting.

III. Connect with wrong AP: Ensure that the client is connected with the correct Access Point.

i. **Right-click** on the **Local Area Connection icon** in the taskbar.

ii. Select **View Available Wireless Networks in Wireless Configure**. Ensure you have selected the correct available network.

iii. Reset the WiFi HSPA+ IAD/ROUTER to default setting

C. Why does my wireless connection keep dropping?

I. Antenna Orientation.

i. Try different antenna orientations for the WiFi HSPA+ IAD/ROUTER.

ii. Try to keep the antenna at least 6 inches away from the wall or other objects.

II. Try changing the channel on the WiFi HSPA+ IAD/ROUTER, and your Access Point and Wireless adapter to a different channel to avoid interference.

III. Keep your product away from electrical devices that generate RF noise, like microwaves, monitors, electric motors, etc.

5 What to do if I forgot my encryption key?

1. Go back to advanced setting to set up your Encryption key again.
2. Reset the WiFi HSPA+ IAD/ROUTER to default setting

6 How to reset to default?

1. Ensure the WiFi HSPA+ IAD/ROUTER is powered on
2. Find the **Reset** button on the right side
3. Press the **Reset** button for 8 seconds and then release.
4. After the WiFi HSPA+ IAD/ROUTER reboots, it has back to the factory **default** settings.

Appendix A Spec Summary Table

Device Interface		CTG561AM
Wireless WAN	USB 2.0 for internal HSPA+ modem	1
Ethernet WAN/LAN	RJ-45 port, 10/100Mbps, 1xWAN / 4xLAN	1
Antenna	2 x PIFA internal antennas	2
WPS Button	For WPS connection	1
Reset Button	Reset router setting to factory default	1
LED Indication	Status / 3G signal Strength / 2.XG / 3.XG / SMS / WAN / LAN / WiFi	●
Power Button	Power ON/OFF button	1
Power Jack	Power Jack, DC 12V/1.5A	1
SIM Card Slot	For SIM card that users get from Telecom	1
Wireless LAN (WiFi)		
Standard	IEEE 802.11b/g/n (2x2) compliance	●
SSID	SSID broadcast or in stealth mode	●
Channel	Auto-selection, manually	●
Security	WEP, WPA-PSK, WPA2-PSK, WPA, WPA2	●
WPS	WPS (Wi-Fi Protected Setup)	●
Functionality		
Wireless WAN	PPP (for HSUPA)	●
Ethernet WAN	PPPoE, DHCP client, Static IP, PPTP, L2TP	●
WAN Connection	Auto-reconnect, dial-on-demand, manually	●
One-to-Many NAT	Virtual server, Special application, DMZ	●
SPI Firewall	IP/Service filter, URL blocking, MAC control	●
DoS Protection	DoS (Deny of Service) detection and protection	●
Management	SNMP, UPnP IGD, syslog	●
Administration	Web-based UI, remote login, backup/restore setting	●
Environment & Certification		
Package Information	Device dimension (mm)	
	Package dimension (mm)	
	Package weight (g)	
Operation Temp.	Temp.: 0~40^{o}C, Humidity 10%~90% non-condensing	●
Storage Temp.	Temp.: -10~70^{o}C, Humidity: 0~95% non-condensing	●
EMI Certification	CE/FCC	●
RoHS	RoHS compliance	●

*Specifications are subject to change without prior notice.

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Linux-2.6.21 system kernel

busybox_1_00_rc2

bridge-utils 0.9.5

dhcpcd-1.3

ISC DHCP V2 P5

syslogd spread from busybox

wireless tools

ntpclient of NTP client implementation

GNU Wget

Availability of source code

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